

MAR 13 '48

THE

MARCH, 1948

Refrigeration

AIR CONDITIONING
EQUIPMENT

INDUSTRY

MERCHANDISING * INSTALLATION * MAINTENANCE



THIS ISSUE:

{ The All-Industry Show In Review... More New Products From the Show
Check Your Costs Or They'll Check Your Profits... Courtesy Counts
Sidewalk Selling... New Defrost System Features Close Control

IMPERIAL TORPEDO DRIERS

*... designed for faster, more efficient drying action
... far longer operation without cleaning*

Dust-Free Silica Gel assures more efficient drying action.



Brazed—no soft solder joint that might loosen.

One-piece copper shell. Fewer joints—less chance for leakage.



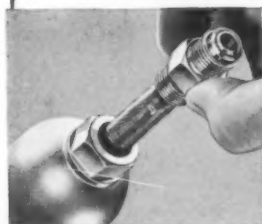
Easy to refill. Hex on both fitting and shell.



Greater filtering area. Finger-type, metallic depth filter is graduated with drier capacity.

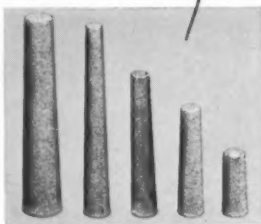


Copper and brass construction.



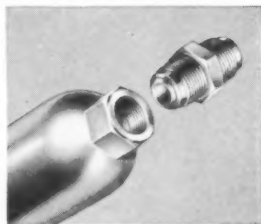
EASILY REFILLED ON THE JOB

Two generous wrench holds, one on inlet fitting and one on shell, make it easy to open drier for refilling. No bolts to unscrew . . . no flanges or springs to remove. No soldering required after refilling.



GRADUATED FILTERING AREA

Size of metallic depth filter is graduated with drier capacity. This assures ample filtering area on larger units. Element is composed of innumerable small bronze particles fused together in a controlled atmosphere.



INTERCHANGEABLE CONNECTIONS

30, 50 and 75 cu. in. sizes have female flare threads on both inlet and outlet which are fitted with male flare unions. To change size, simply replace union furnished with reducing union of desired size.

A complete line to meet all refrigeration applications. Capacities rated in accordance with REMA recommendations. All eight sizes—1/6 to 7-1/2 HP . . . 3 to 75 CU. IN. capacity—are furnished complete with flare nuts and copper seal caps.

Ask for your copy of the new Catalog No. 80 covering the complete IMPERIAL LINE.

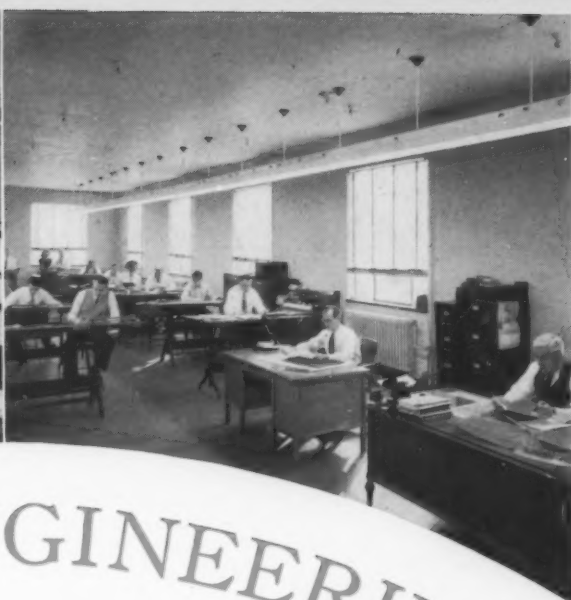
SEE YOUR JOBBER!

THE IMPERIAL BRASS MFG. CO., 534 South Racine Avenue, Chicago 7, Illinois

IMPERIAL

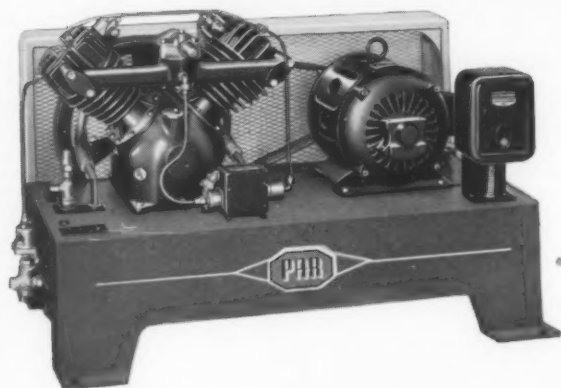
Fittings • Valves • Driers • Filters • Floats • Charging Lines
Tools for Cutting, Flaring, Bending, Pinch-Off and Swedging





LYNCH ENGINEERING

Builds and Maintains . . .



DEPENDABLE

PAR

SERVICE

Lynch Engineers, working in all-modern engineering departments equipped with the latest type precision instruments, keep a continual check on Par performance. Always striving to build greater efficiency, more dependable service into every Par Condensing Unit . . . your assurance that when you buy Par, you buy years of engineering skill that is reflected in economical, efficient performance and extra years of dependable service. That's why—
"By Comparison—They Buy Par."

*Ask your Par Wholesaler for complete details
and specifications on the Par line of condens-
ing units or write direct for Par Catalog R-99.*

By Comparison — You'll Buy PAR

LYNCH CORPORATION

Par Compressor Division

TOLEDO 1, OHIO U.S.A.



THE Refrigeration INDUSTRY

VOLUME 5, NO. 3

THIS MAGAZINE has no official affiliation with ANY group, society or association.

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SAM R. TRACY



THE COVER . . . Self-service refrigerated equipment is growing in popularity even in the smaller neighborhood markets, and it means increased profits for merchants—and an increased prospect-list for alert refrigeration dealers. (Photo from Tyler Fixture Corp.)

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Here's to Quality!



J & H ELECTRIC MOTORS . . . Quiet, light-weight . . . more than a million have rolled off the lines of J & H during the past 22 months.



J & H CONDENSING UNITS . . . Exceptionally quiet and economical . . . improving the performance of milk coolers, freezers, ice cream cabinets and other refrigeration equipment.



J & H BALL BEARINGS . . . Made to new high standards of controlled precision . . . super-hard and tough . . . today are reducing friction and wear in automobiles, machinery and appliances.



J & H MAGNETOS . . . World-famous Eise-menn, Jack & Heintz engineers are continually improving them for easier engine starting.



J & H AIRCRAFT PRODUCTS . . . Starters, gen-erators, inverters, aircraft motors and other components . . . now manufactured by a stream-lined, consolidated J & H Aviation Division.

Jack & Heintz products . . . mass produced with laboratory precision . . . are bringing to appliances, machines, tools and engines a new high standard of quiet, smooth, dependable performance. Ask for these J & H products for outstanding quality.

Better products through

JACK & HEINTZ

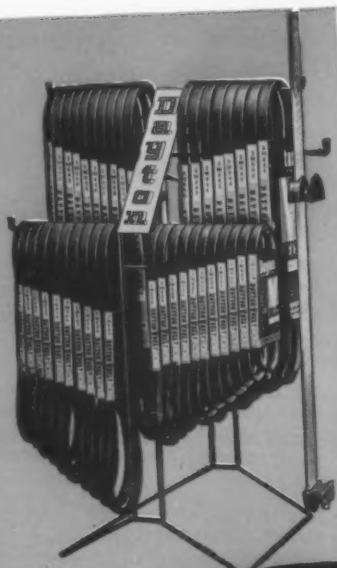
Mass Precision

JACK & HEINTZ PRECISION INDUSTRIES, INC., Cleveland 1, Ohio

COMPLETE *One Package* SALESMAKERS

Make You Fractional Horsepower

V-BELT REPLACEMENT HEADQUARTERS



SENIOR SALESMAKER

**WITH 39 FASTEST SELLING
DAYTON FHP BELTS**

Brings Big Dealer Profits

Dayton V-Belts are used on millions of refrigerators, washing machines, pumps, compressors and all types of fractional horsepower motors.

In addition to all the above, Dayton gives you a plus selling feature that can't be beat! *Unsurpassed V-Belt Quality!* Now all Dayton V-Belts are made with Rayon Cord—specially processed by Dayton, to provide Dayton V-Belts with minimum stretch, greater flex strength and longer life. For further information, write today.

DAYTON RUBBER • DAYTON, OHIO

**BOTH PACKAGES
INCLUDE...**



JUNIOR SALESMAKER

**WITH 25 FASTEST SELLING
DAYTON FHP BELTS**

Good Profit on Small Investment

Popular Dayton V-Belts are available for all small machinery use. Recognized as a quality product the moment they're displayed—they move fast.



**NEW
DAYTON V-BELT
MATCHOMETER**
unequalled for speed and simplicity in finding the correct replacement V-Belt.

**INSTRUCTION FOLDER with
HELPFUL DISPLAY HINTS**

How to use the Matchometer—how to select the correct replacement V-Belt—how to utilize the merchandising aids, etc.



**WALL AND WINDOW
STREAMERS**

Colorful attention-getting banners, streamers and window posters are packed with each assortment.



**HANDY FHP CATALOG
No. 44**

Complete listing of all types of small machinery with the correct V-Belt replacement readily available in a handy pocket-size booklet.



Quick Reference PRICE CARD

Belt numbers, size and suggested resale price are included on each card for ready and quick reference.

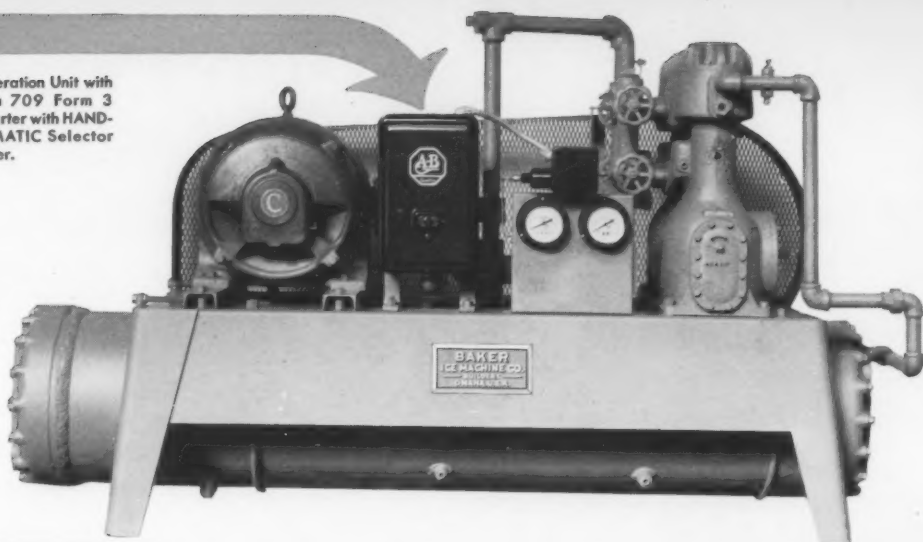


Dayton Rubber

THE MARK OF TECHNICAL EXCELLENCE IN NATURAL AND SYNTHETIC RUBBER

THE REFRIGERATION INDUSTRY

Baker Refrigeration Unit with
A-B Bulletin 709 Form 3
Automatic Starter with HAND-
OFF-AUTOMATIC Selector
Switch in cover.



BAKER

REFRIGERATION UNITS

equipped with

Trouble-Free Motor Controls



Bulletin 709 solenoid motor starter
for automatic refrigeration control.
White interior reflects light in dark
corners. Ample wiring space.

ALLEN-BRADLEY STARTERS ARE TROUBLE FREE. Only one
moving part. No pivots, pins, or bearings to corrode or stick . . . no
jumpers to break. You install them . . . and forget them!

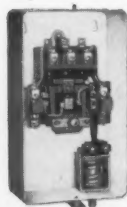
NO CONTACT MAINTENANCE. Allen-Bradley patented silver
alloy contacts never need cleaning, filing, or dressing.

DEPENDABLE OVERLOAD RELAYS. Allen-Bradley thermal re-
lays are accurate and dependable even after long service.

The A-B trademark stands for millions of trouble-free operations.
Allen-Bradley Co., 1340 So. Second St., Milwaukee 4, Wis.

ALLEN-BRADLEY AIR-CONDITIONING AND REFRIGERATION CONTROLS

PRESSURE AND TEMPERATURE
CONTROLS

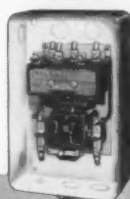


High-pressure
cutout and mo-
tor starter in
same enclosure.
Temperature
controls can be
mounted with
motor starter
in same way.

MANUAL
STARTER



AUTOMATIC
STARTER



COMBINATION
STARTER



HEAVY COMPRESSION
STARTER



ALLEN-BRADLEY

SOLENOID MOTOR CONTROL

QUALITY



America's
BEST EQUIPPED
Dealers Present—

**SEE WEBER
BEFORE YOU BUY!**



Weber Showcase and Fixture Co., Inc.
5700 Avalon Boulevard
Los Angeles 54, California



FOUR REGIONAL OFFICES: NEW YORK — CHICAGO — DALLAS — LOS ANGELES



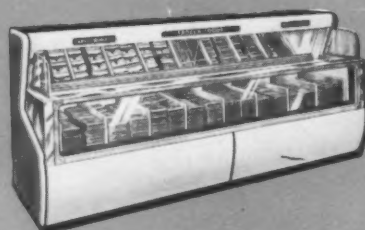
WEBER ROLL-A-DOOR

- ★ Ice Cream and Frozen Foods Self Service Display Cabinet
- ★ Greater visibility
- ★ Patented defrosting track
- ★ Easier access
- ★ Positive zero protection
- ★ Available without superstructure & glass doors; solid doors for storage



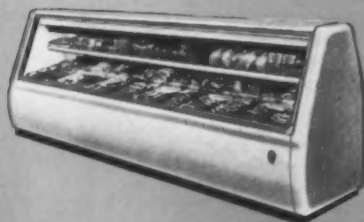
WEBER SUPER SERV-MASTER PRODUCE CASE

- ★ Balanced Refrigeration
- ★ Produce kept fresh, crisp
- ★ Waste and Spoilage Minimized
- ★ Larger Capacity
- ★ Smart Styling
- ★ Mirrored Superstructure for Twice the Display



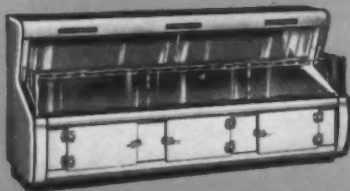
WEBER FROZEL LOW TEMPERATURE SELF SERVICE DISPLAY CASE

- ★ Brilliant "Spot-light" Illumination
- ★ Clear View Front
- ★ Larger Merchandise Capacity
- ★ Distinctive Styling
- ★ Holds Temperatures of Zero and Below



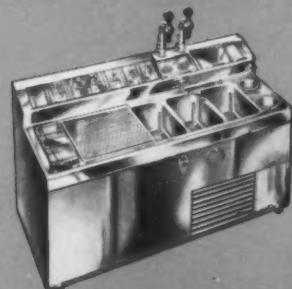
WEBER "DOUBLE-DUTY" DISPLAY MASTER MEAT CASE

- ★ Ten foot length
- ★ Wider vision ... better display ... easier access
- ★ Blind lower storage
- ★ Available in 7 foot length
- ★ Mezzanine shelf



WEBER SERV-MASTER "DOUBLE-DUTY" DISPLAY CASE

- ★ A Profit-Making All-Purpose Display Case
- ★ Reduces Shrinkage and Spoilage To Minimum
- ★ Double Capacity In Same Floor Space
- ★ "Spotlighted" Mass Display
- ★ Two Sealed Off sections, each coiled for refrigeration
- ★ Welded Steel Construction ... Gleaming Porcelain Exterior



WEBER "BOBTAIL" THREE SINK SODA FOUNTAIN

- ★ Stainless Steel Top Die-stamped In One Piece
- ★ Auxiliary Service In Limited Space
- ★ All the Sanitation Features of Larger Models

'48's GREATEST VALUE

FOOD MERCHANDISING EQUIPMENT AT NEW LOW PRICES

The Big "Baker's Dozen" For The Profit-Wise!

Take a tip from the thousands of Weber users who say—"you need help to sell merchandise. We've found Weber Refrigerated Equipment does its job of merchandising 'to the Nth degree.'"

Brilliant styling... better refrigeration... dependable quality... merchandising "know-how" are designed into Weber Equipment to give you greater profits through faster turnover... lower operating costs... and longer-life.

Whatever refrigerated food merchandising equipment you need, the "Best Equipped Dealer In Your Territory" can serve you now! At his beck and call is the staff and services of one of the Four Weber Regional Offices assuring him and you faster deliveries, expert product servicing—direct "factory" contact.

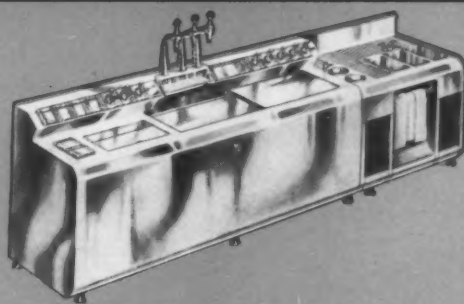
So—for your greatest food merchandising equipment value in '48..."SEE WEBER BEFORE YOU BUY."

YES! SUCCESSFUL MERCHANTS SAY—"YOU SELL WORLDS OF MERCHANDISE WITH WEBER."



**WEBER "ENDLESS-VIEW" DISPLAY
MASTER MEAT CASE**

- ★ Used as single units or joined for "Endless-View"
- ★ Economical rearrangement of store layout any time
- ★ Better display... wider vision... easier access
- ★ Two added square feet of profitable display space



WEBER ROLL-A-DOOR SODA FOUNTAIN

- ★ Stainless Steel
- ★ Slant Service Edges
- ★ JAR-PUMPS and Fruit
- ★ Perfect Operational Balance Point
- ★ Roll-A-Doors
- ★ 35% greater ice cream capacity
- ★ Toe recess

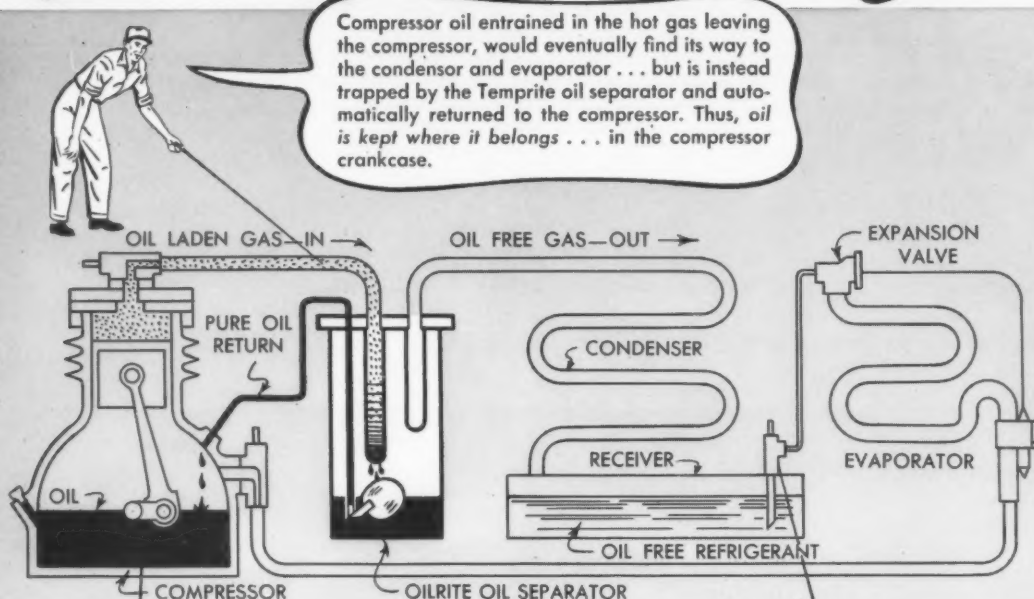


WEBER COMPLETES THE LINE

- WEBER WALK-IN COOLER WITH FULL-VIEW SELF-SERVICE DOORS—It's sectional!
- WEBER MASTER VALUE REACH-IN REFRIGERATORS—Equipped with either glass or solid doors
- WEBER "FOUNTAINETTE"
—Small, but amazingly versatile
- WEBER SECTIONAL "LUNCHEONETTE"
EQUIPMENT—Line up or use separately
- WEBER WALL-TYPE REFRIGERATED SELF SERVICE DISPLAY CASE—Dairy and Delicatessen Products

REMEMBER: PROFIT PLANNING MEANS THE PLANNED INSTALLATION OF WEBER EQUIPMENT

Keep oil where it belongs...



Available in capacities from 1/6th h.p. to 50 tons . . . for all types of commercial applications.

Crankcase oil level remains constant at all times, eliminating danger of scored cranks, wrist pins or cylinders.

Oil free coils mean that the refrigerant boils at its true boiling point and heat transfer is frequently increased as much as 15 to 20%.

...with a **TEMPRITE** oil separator

Oil congeals quickly in low temperature coils, cutting down heat transfer and boosting operating time. Because of this common difficulty it is frequently impossible to reach desired temperatures. A Temprite Oil Separator overcomes

this problem and permits the refrigerant to boil at its true boiling point. Temperatures from 4 to 7 degrees lower are easily reached at no increase in operating time.

Write now for full particulars.

TEMPRITE PRODUCTS CORP.

ESTABLISHED 1929



Originators of Instantaneous



Liquid Cooling Devices

41 PIQUETTE AVENUE

DETROIT 2, MICHIGAN

THE REFRIGERATION INDUSTRY



ANSUL Technical Service

Since 1915, the name ANSUL has become well known in the refrigeration field, not only as a producer of high grade refrigerants but, also, as a reliable source of authentic, up-to-the-minute technical information.

Over this span of years ANSUL RESEARCH has accumulated volumes of data and made extensive studies in many phases of refrigeration, especially those associated with the chemical aspects of refrigerants, oils, etc. This has resulted in the compilation of an ANSUL library of technical knowledge invaluable in the solution of refrigeration problems.

ANSUL Technical Service is available to Refrigeration Engineers everywhere through ANSUL'S universal wholesaler organization. Your ANSUL wholesaler welcomes you to make full use of it without cost or obligation.

Take your refrigeration problems which arise from time to time in the operation of refrigeration systems to your ANSUL wholesaler. He probably has the ANSUL technical bulletin which will give you the answers to your questions. If not, he will be glad to get the information for you from ANSUL RESEARCH. He wants to make your job easier and more profitable.



ANSUL REFRIGERANTS—SULFUR DIOXIDE; METHYL CHLORIDE, KINETIC'S "FREONS," AND METHYLENE CHLORIDE—ARE AVAILABLE AT LEADING ANSUL WHOLESALERS EVERYWHERE.

® REG. U. S. PAT. OFF.



1 BULLETIN ON SLUDGES

Data on the origin, composition, distribution and general properties of Sludges.

2 BULLETIN ON SEPARATION OF WAX FROM OIL-REFRIGERANT MIXTURES

Information on the effect of temperature, concentration and types of oils on Wax formation in Oil-Refrigerant Mixtures.

3 BULLETIN ON MOISTURE AND DRYING METHODS

A compilation of proved methods of Handling Moisture in Refrigeration Systems.

4 BULLETIN ON REFRIGERANT DRIERS

A thorough study of the efficiency of the more common refrigerant driers in addition to data on Corrosion Limits of water-refrigerant mixtures.

5 BULLETIN ON KEEPING SERVICE CYLINDERS CLEAN

Outlines methods of Cleaning and Drying Service and other Cylinders. Explains why overfilling cylinders is dangerous.

6 BULLETIN ON ALUMINUM AND METHYL CHLORIDE

Gives the reasons for the complete elimination of Aluminum in Refrigerating Systems charged with methyl chloride.

ANSUL CHEMICAL COMPANY

REFRIGERATION DIVISION, MARINETTE, WISCONSIN

DISTRIBUTORS FOR KINETIC'S "FREON-11," "FREON-12," "FREON-21," "FREON-22" AND "FREON-113"



... I Like THE LINE ...

I Like THE SERVICE ...

I Like THEIR ENGINEERING TALENT

There's something about doing business with USAIRCO I like and I think you'll like.

First, there's the USAIRCO line of equipment. All top construction—all first rate in quality. Simply engineered and ruggedly built. USAIRCO has been making good equipment for a quarter-century—and when you figure that out in terms of the industry... it stamps USAIRCO as one of the most experienced in the field.

Then there's the service one gets from USAIRCO. The manufacturing operation is large enough to have all the benefits of mass production... yet not so big as to be unwieldy. You can get decisions from them... deliveries from them... in short a type of service that always seems to be extra special.

Then there's the USAIRCO Engineering staff. They have the finest equipment to work with—they have outstanding engineering talent selected from the best technical colleges. They have the accumulated experience that comes from years of working on air conditioning problems.

USAIRCO all adds up to one of the best of the good organizations in the country. Try them. I think you'll like them as I like them.



**UNITED STATES AIR CONDITIONING
CORPORATION**

Como Ave. S. E. at 33rd • Minneapolis 14, Minn.



**YOU'LL LIKE THIS *New*
BONNEY REVERSIBLE RATCHET**



No. RF45 Reversible Ratchet

This is the most used tool in any refrigeration service man's kit. The 1/4" square drive ratchet is instantly reversible by a touch of the thumb. The action is easy yet sure and the entire tool is light in weight, trim yet strong.

In addition to the 1/4" square ratchet opening, this tool has a 3/16" and a 1/4" square opening, and a 1/2" hexagon socket in the handle.

This tool will save a lot of time in working on small refrigerant cylinders, shut-off and reducing valves, compressors, motors, etc.

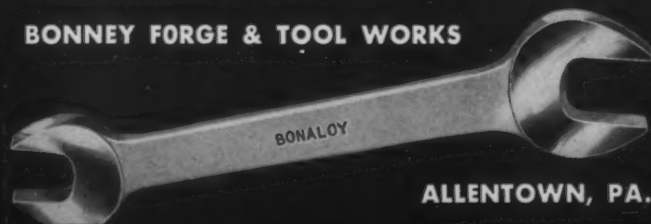
This new tool, like all the tools in the complete Bonney line, is made to the highest standards of the industry for strength, long life and easy, handy use. Cut out and mail the coupon below for your copy of the complete new Bonney Catalog and the names and addresses of your nearby Bonney Tool Jobbers.

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TOOLS

World's Finest

TOOLS

BONNEY FORGE & TOOL WORKS



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BONNEY FORGE & TOOL WORKS, ALLENTOWN, PA.

Please send me without charge, latest catalog showing Bonney Tools and Tool Sets.

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ADDRESS _____

CITY _____ ZONE _____ STATE _____

LET'S ANALYZE

Quality

"DETROIT" NO. 450 CONTROLS MODEL FIBA DUAL PRESSURE CONTROL ILLUSTRATED

RANGES { Low Side—20" vac. to 40 lbs.
High Side—125 lbs. to 225 lbs.

These ADD UP TO FLEXIBILITY OF INSTALLATION

Range, Differential, and High Pressure Cut-out adjustments readily accessible.

High Pressure Cut-out easily replaceable in the field.

Inside and Outside Differential and Range adjustments available in various models.

Snap Switch a complete sub-assembly—removable by loosening a single screw.

AC or DC switches interchangeable and replaceable in the field.

Constant Cut-in or Cut-out models available.

Available with pressure or temperature responsive elements.

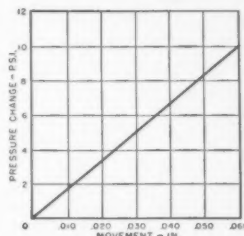
Pressure and temperature responsive elements replaceable in respective models.

These ADD UP TO PERFECT REFRIGERANT CONTROL

1 Buckling spring snap switch for constancy of setting.

2 High Pressure Cut-out for motor and system protection.

Bellows for flexibility and uniform power element response.



These ADD UP TO CUSTOMER PROTECTION

12 Silver Contacts for long life and dependability.

13 Reinforced All Metal Case.

14 Duraflex Bellows.

15 Vermin, insect and moisture proof switch.

DETROIT LUBRICATOR COMPANY



General Offices: 5800 TRUMBULL AVENUE, DETROIT 8, MICHIGAN

Division of AMERICAN RADIATOR & STANDARD SERVICE CORPORATION

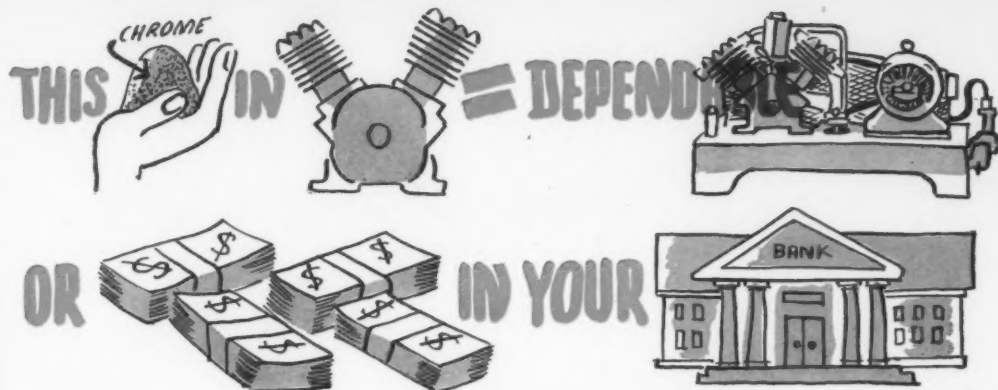
Canadian Representatives — RAILWAY AND ENGINEERING SPECIALTIES LIMITED, MONTREAL, TORONTO, WINNIPEG

"Detroit" Heating and Refrigeration Controls • Engine Safety Controls • Float Valves and Oil Burner Accessories • "Detroit" Expansion Valves and Refrigeration Accessories • Stationary and Locomotive Lubricators

BRUNNER
SINCE 1906

REFRIGERATION helps you serve better

Memo to Equipment Installers

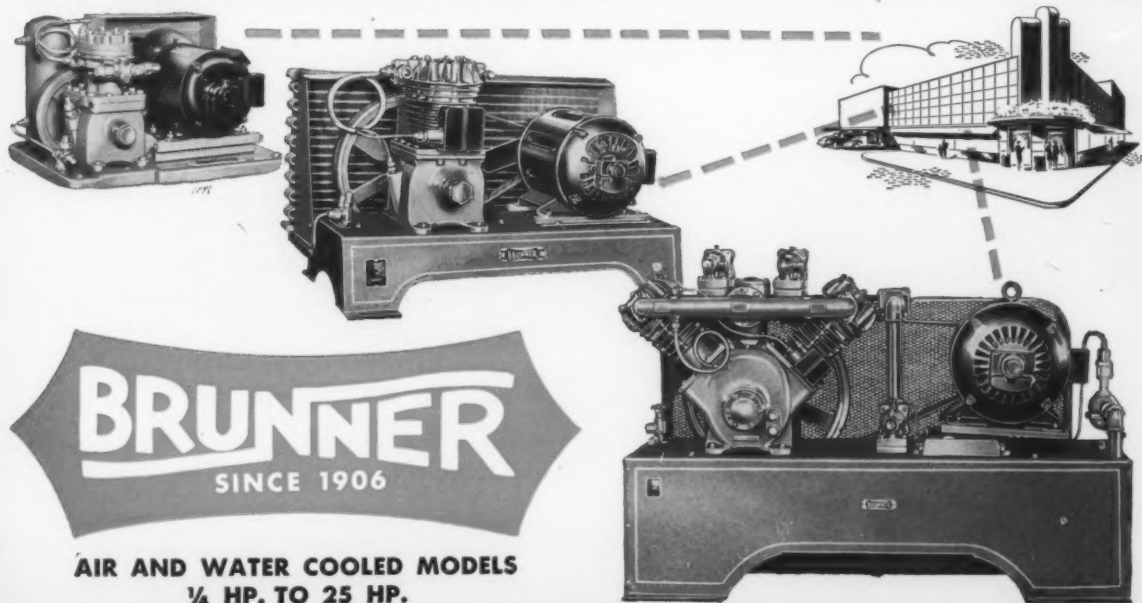


That handful of chrome in the compressor casting can well be the starting point of more profits from sales and more complete customer satisfaction. This and many other technical reasons why Brunner condensing units have become "most wanted" will make interesting listening and your business more profitable. Spend a little time with a Brunner factory representative* who talks your language — knows your sales and service problems.

The recognized quality of Brunner units has forced greatly expanded manufacturing facilities—new buildings—more assembly lines—latest developments in precision machinery. It makes good sense to "check up" and have the advantages of Brunner acceptance by your trade.

*Write us. When would you like to have him stop in?

BRUNNER MANUFACTURING CO.
UTICA 1, NEW YORK, U. S. A.



BRUNNER
SINCE 1906

AIR AND WATER COOLED MODELS
¼ HP. TO 25 HP.

FRIGID-FREEZE

DISTRIBUTORS

Are Cashing in Big
on "Salesational" Facts
and Figures like these:

Reports from all over the country indicate sensational sales increases of frozen foods and ice cream wherever the FRIGID-FREEZE "Spot-Special" is in use:

● **GRAND UNION SUPER MARKET—NEW YORK.** A "Spot-Special" was installed in November, 1947, and stocked with ice cream. This store has been selling ice cream for 7 years . . . has accurate figures on sales for each month. The "Spot-Special" was purposely placed in the same location as the regular cabinet. The results:

| | | |
|--|---|--|
| Nov. 1946 with former cabinet 85 gallons | Nov. 1947 with "Spot-Special" 179 gallons | Increase with "Spot-Special" *111% |
|--|---|--|

*NOTE: This increase in sales was made despite an over-all industry drop in November of 29%.

● **SNOW CROP DISTRIBUTORS—KANSAS CITY, MO.,** placed a FRIGID-FREEZE "Spot-Special" in a Kroger Super Market, to test its performance in selling a "Budget Bundle" of frozen foods, at the same time that a nationally famous competitor was advertising and selling a similar complete dinner unit, from a conventional 20 cu. ft. cabinet. Results:

| | |
|----------------------------------|------------------------------------|
| Conventional Cabinet 31 units | "Spot-Special" Cabinet 87 units |
|----------------------------------|------------------------------------|

Likewise, over a 2-day period, the "Spot-Special" was used to sell a "special" of frozen Parker House rolls. The results:

The "Spot-Special" sold 37 doz.—324 packages!
NOTE: The "Spot-Special" holds an average of 20 dozen frozen food packages.

● **VILLAGE MARKET—WILTON, CONN.,** installed a FRIGID-FREEZE "Spot-Special" in October, 1947, stocked it with ice cream. Despite seasonal decrease, sales climbed from 72 gallons in September (with the conventional cabinet) to 107 gallons in October with the "Spot-Special".

● **THE BRIDGFORD CO.—LOS ANGELES, CAL.** This well known packer of frozen peas placed a FRIGID-FREEZE "Spot-Special" on test in 3 Piggly-Wiggly Stores in San Diego, to compare its sales of frozen peas with a conventional full-sized cabinet carrying the same item. The results:

| Store | Conventional Cabinet sold | "Spot-Special" sold | Increase |
|---------------|------------------------------|------------------------|-----------|
| No. 1—7 days | 30 units | 204 units | 7 times |
| No. 2—11 days | 40 units | 144 units | 3½ times |
| No. 3—6 days | 13 units | 216 units | 16½ times |



Reprinted from
N. Y. Journal of Commerce
January 12th

The FRIGID-FREEZE Distributor has something sensational to offer that nobody else can match. For the combination of exclusives in FRIGID-FREEZE equipment that we call "Merchandising Magic" is increasing the sales of frozen foods and ice cream to a surprising extent.

It is doing even more than that: it is setting new sales patterns wherever the new FRIGID-FREEZE cabinets are used.

**IN 1948 . . MORE FROZEN FOODS
WILL BE SOLD OUT OF
FRIGID-FREEZE CABINETS
THAN OUT OF ANY OTHER MAKE:**

Mark these challenging words that are based on conclusive facts and figures such as are submitted here . . . and are being reported regularly from every part of the country.

Accept this statement as the FRIGID-FREEZE theme of action in 1948 and our invitation to you to wire or write today for further details of the FRIGID-FREEZE Distributor-Dealer Program.

A few territories are still open, offering big returns for hard-hitting representation.

Merchandising Magic

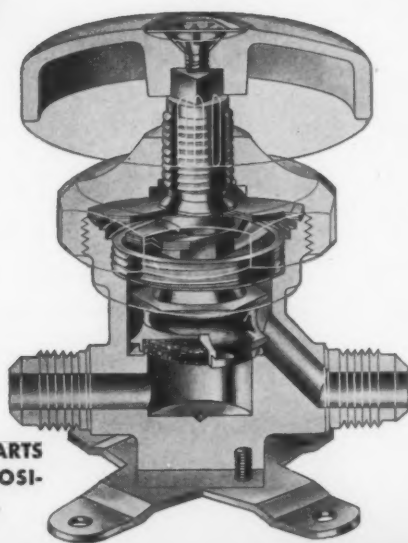


REFRIGERATION CORPORATION OF AMERICA
GENERAL OFFICES AND FACTORY: BARBER, NEW JERSEY • A DIVISION OF NOMA ELECTRIC CORPORATION

FEWER SERVICE "CALL BACKS"



• Service "call backs" on installation work can eat into profits. Eliminate valve trouble and frequent servicing with Weatherhead Packless Valves.



ONLY 4 MOVING PARTS
FOR LONG LIFE, POSI-
TIVE CONTROL.

Look Ahead with

Weatherhead

The Weatherhead Company • Cleveland 8, Ohio

CLEVELAND • NEW YORK • DETROIT • CHICAGO • LOS ANGELES

**It's not HOW MUCH moisture
you remove from a refrigeration
system that counts ...
It's HOW LITTLE moisture
is left!**

SPORLAN

**To really dry a
system...install a**

SPORLAN

*Catch-
All*



THE CATCH-ALL IS
AVAILABLE IN 1/4,
1/2 AND 1 TON SIZES

1 The unique porous cylinder of the Sporlan Catch-All is molded of minute particles of a highly efficient desiccant, whose efficiency is greater than that of the same desiccant in granular form.

2 The Sporlan Catch-All after being completely assembled is activated to a high degree of dryness which, in turn, assures drying the system to an extremely low end point.

3 Immediately after activation, the Sporlan Catch-All is sealed with moisture proof seals so that it can not pick up any moisture before installation.

4 Due to its molded construction, the Sporlan Catch-All cannot powder. Therefore, none of the desiccant can pass into the system, causing expensive breakdowns.

5 Again, due to its molded construction, the Sporlan Catch-All cannot pack. Packing of the desiccant in an ordinary drier causes a high pressure drop, which is never present in the Catch-All.

6 And again, due to its unique molded construction, the refrigerant cannot channel around the desiccant of the Sporlan Catch-All. All of the refrigerant must go through the molded porous cylinder.

7 In addition to efficiently drying the refrigerant, the molded porous cylinder of the Sporlan Catch-All will catch all scale, solder particles, carbon, sludge, dirt or any other foreign matter as minute as 9 microns with negligible pressure drop.

...THE PERFECT FILTER-DRIER!

The use of oversize driers does not solve the moisture problem on most jobs. The only real solution is to use a drier that dries down to a low end point... a point so low that any remaining moisture is absolutely harmless!

**HERE IS WHY THE SPORLAN CATCH-ALL
IS THE PERFECT FILTER-DRIER**

If you want refrigeration systems
that are REALLY DRY...install SPORLAN Catch-Alls
and get Peak Performance on all installations.

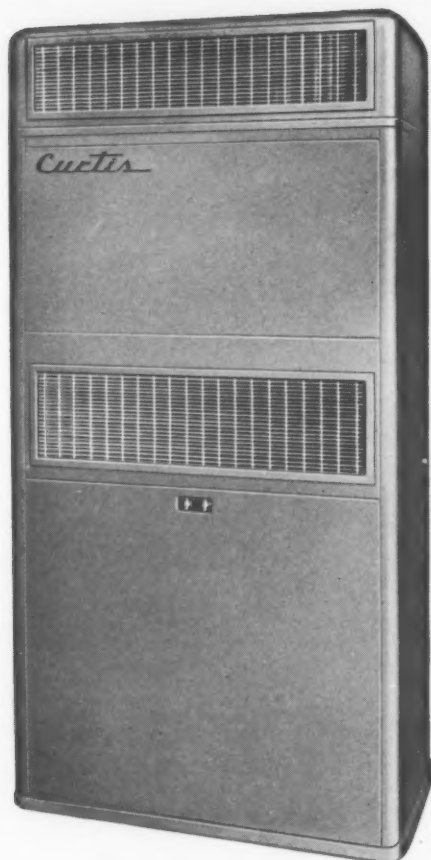
SPORLAN VALVE CO.

7525 SUSSEX AVENUE, ST. LOUIS 17, MISSOURI
★ THE CATCH-ALL IS OBTAINABLE AT ALL SPORLAN WHOLESALERS

CURTIS

REFRIGERATION AND AIR CONDITIONING EQUIPMENT

.. Offers More to You and Your Customers

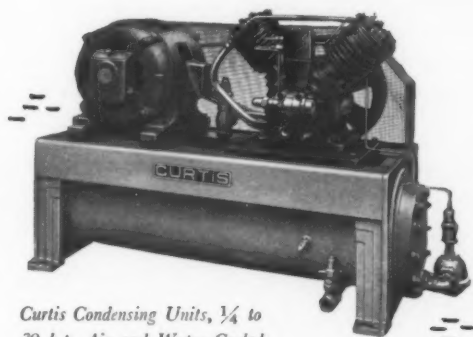


*Curtis Packaged Air Conditioner,
Capacities 3, 5, 7½, 10 and 15 tons*

For commercial refrigeration or air conditioning applications the complete Curtis line offers more to your customers—in satisfactory, trouble-free performance, sound, proven design and engineering and lower operating and maintenance costs. Curtis advantages include:

- Timken Bearings
- Extra large condensers
- Slow operating speed — quiet performance
- The Finest Materials — Precision Construction
- Long Life
- Full range of sizes and capacities

You'll sell more, make more profits when you sell Curtis. Write for full information today.



*Curtis Condensing Units, ¼ to
30 h.p. Air and Water Cooled*

CURTIS

REFRIGERATING MACHINE DIVISION

of Curtis Manufacturing Company

1915 Kienlen Ave. • • St. Louis 20, Missouri

AB 584

94 Years of Precision Manufacturing

Carrier makes refrigeration history

CUSTOMIZED* **COMPRESSORS**

***Custom-tailored to meet the exact requirements of the job!**

1

You get exactly the right
COMPRESSOR to fit your
needs—5 to 100 hp.

2

You get a special
universal-type **STEEL BASE**
—if you need it.

3

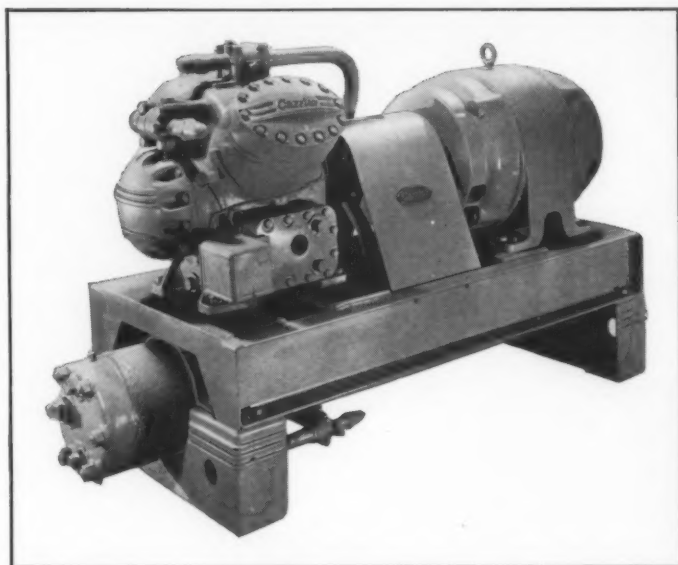
You get a **MOTOR** of exactly
the right horsepower—any
make, any speed, any voltage.

4

You get a **COUPLING** for
direct drive or **FLYWHEEL**
for V-belt drive—
whichever you prefer.

5

You get a medium or low
temperature **CONDENSER**—
whichever fits your needs.



• You assemble the selected units right on the job — no troublesome handling of heavy, bulky assemblies. You get any one of 1000 different combinations — the perfect refrigeration for your requirements. You pay for only the capacity you actually need—and keep on saving through low operating costs.

• Besides the economy of "custom tailoring," these Customized Compressors give you the many exclusive features that make Carrier refrigeration your best buy — automatic load-free starting . . . built-in capacity control . . . vapor-cushioned valves . . . precision-type removable bearings . . . magnetic oil-drain plugs. Write now for free copy of Catalog 5FH1 — "5 to 100 Horsepower Refrigerating Compressors and Condensers." Carrier Corporation, Syracuse, New York.



AIR CONDITIONING • REFRIGERATION • INDUSTRIAL HEATING

A Better Job

A Better Profit



NIBCO

WROT FITTINGS

for Refrigeration and Air Conditioning



FOR A JOB that insures trouble-free service and customer satisfaction use NIBCO WROT Fittings. They form perfect solder joints, stronger than the tube. Adapters are forged from red brass pipe from which refrigerant gases can't escape.

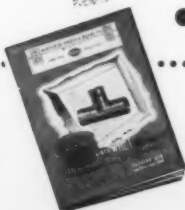
NIBCO WROT Fittings are accurately formed to close tolerances under hydraulic pressure, by a patented process. *They're economical to work with because they fit.* Available in all commonly used sizes. Conveniently packaged and marked for quick, easy identification in time-saving cloth sacks. NIBCO'S uniform quality assures long life, dependable service—protects your profits and builds more business.

NORTHERN INDIANA BRASS COMPANY
ELKHART, INDIANA

● HIGH QUALITY VALVES AND FITTINGS SINCE 1904

SEND FOR CATALOG 614

Illustrating and describing the complete line of NIBCO WROT copper fittings for refrigeration and air conditioning.



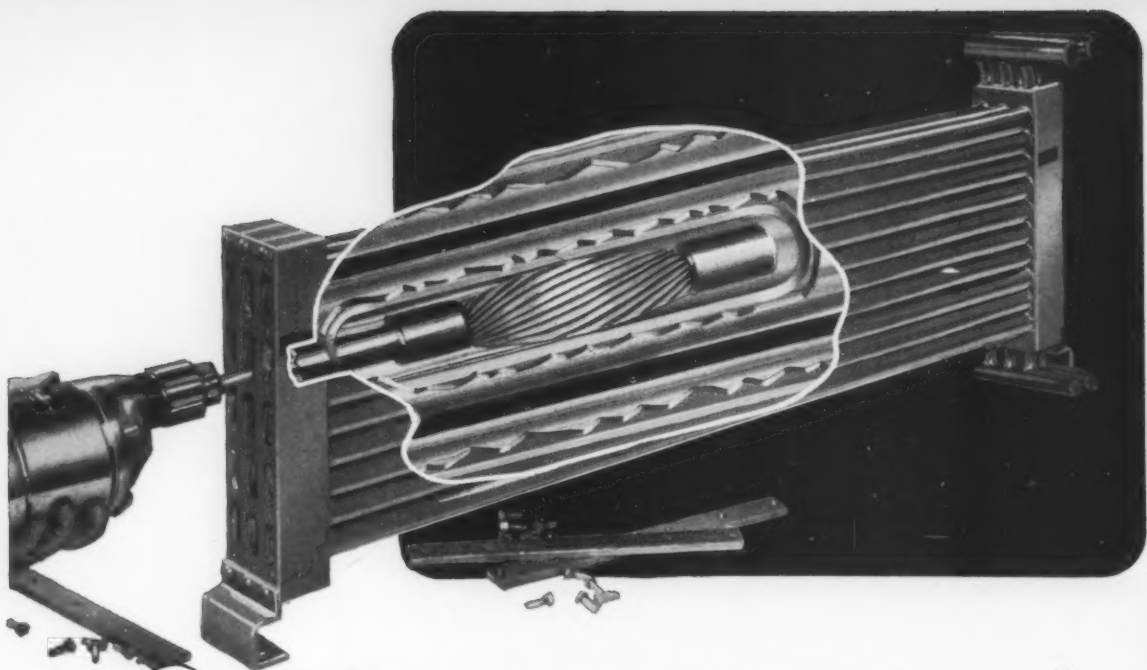
Northern Indiana Brass Co., 314 Plum St., Elkhart, Indiana
Without obligation please send Catalog 614.

Name

Street

City State

MARCH, 1948



(HM) condensers more economical because they're cleanable!

Commercial users and service engineers the country over are now specifying Halstead & Mitchell condensers for replacement and conversion orders—to obtain the most economical operation with maximum efficiency.

These new HM units combine two qualities never before obtainable in tube-within-a-tube, water-cooled condensers—they're cleanable, and they achieve TRUE counterflow heat-exchange relationship between the coolant and the refrigerant, enabling water requirements to be reduced without sacrificing condenser unit capacity.

On your replacement or conversion requirements, specify HM condensers—any size from $\frac{1}{2}$ to 10 H.P.

It's the CLEANABLE feature that makes HM condensers different! Recover "new-unit efficiency" through the simple use of a power-driven cleaning tool, as pictured. Water tubes are accessible at both ends for the spiral tool to clean and restore copper water surfaces to their original heat-exchange efficiencies.

JOBBERs in all principal cities carry HM condensers in stock for immediate delivery—standard sizes of $\frac{1}{2}$ to 10 H. P.
Write for jobber list and descriptive literature.


Halstead & Mitchell

OFFICES: Bessemer Building, Pittsburgh 22, Pa.

THE REFRIGERATION INDUSTRY

TESTED...



Precision Meter checks piston diameter for .0003" accuracy as well as roundness and taper.

TESTED...



End flange check. Inspector is measuring depth of lubricating pump plunger slot.

TESTED...



3000 kilogram pressure tests hardness of crankshaft. Impression's diameter is then measured microscopically.

...to back your recommendation of

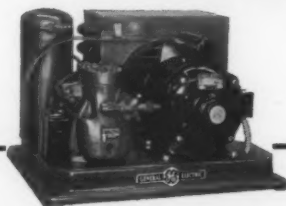


TYPE CW CONDENSING UNITS

Why does General Electric submit its equipment to such expensive, thoroughgoing tests?

Because G. E. wants the double-backed prestige of having not only the best *line* of products, but the knowledge that each product has received the best attention G. E. knows how to give.

Thus do we *back* up our own selling features: the new CW line includes units from $\frac{1}{8}$ hp to $\frac{1}{2}$ hp . . . 8 air cooled and 4 water cooled models . . . integrated in 3 basic compressor sizes, many parts of which are themselves interchangeable. Even the advantages to you of easier selection, wide capacity range, and lower parts stock have paved the way for newer, stricter tests . . . giving you greater dependability than ever before. The pride G. E. takes in its quality control is your assurance of equipment whose quality is truly beyond the ordinary . . . and whose quality is consistent! General Electric Company, Air Conditioning Department, Section C8143, Bloomfield, New Jersey.



CHECK THESE FEATURES

1. Forced feed lubrication.
2. Counterbalanced crankshaft.
3. Oil sight glass which gives a positive check on operation of lubrication system.
4. Rotating balanced bellows shaft seal.
5. Thin valve plate for high volumetric efficiency and low operating cost.
6. Many interchangeable replacement parts.
7. Lead-plated copper gaskets for a better seal and easier servicing.
8. All units run-in tested under actual operating conditions before leaving factory.
9. Wide opening ring type valves of high-strength Swedish steel.

GENERAL ELECTRIC

Refrigeration Equipment

30°



for

FRESH MEAT

WITH

THERMOBANK

by **KRAMER**

Only THERMOBANK keeps
Coils Frost-Free *Automatically*
at any Temperature

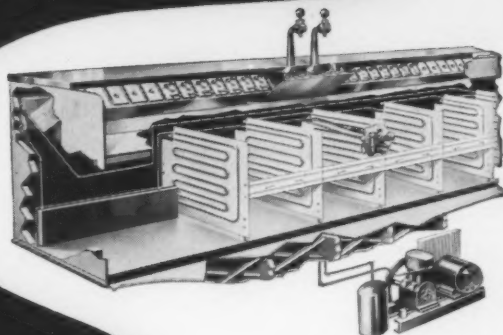
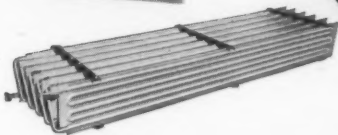
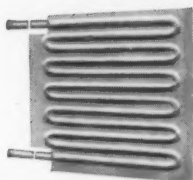
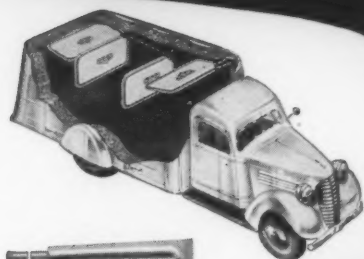
without

{ LABOR
ATTENTION
ELECTRIC HEATERS
BRINE OR WATER SPRAYS

WRITE FOR
BULLETIN R124

KRAMER TRENTON CO. *Trenton 5 N. J.*

This KOLD-HOLD Principle



applied in
these products



means **PROFITS** for you

KOLD-HOLD "Quick Action" Serpentine Plates have a multitude of applications . . . all profitable to the user. Used to equip new installations, or to convert out-dated ones . . . used separately, in banks, plate stands, or as cabinet liners, they assure you the following advantages:

1. Easy installation.
2. Maximum prime surface.
3. Highest rate of plate heat acceptance.
4. No possibility of short circuiting the flow of refrigerant, which flows in one continuous pass from inlet to outlet.
5. Oil logging positively prevented.
6. Minimum pressure drop.
7. Tested under pressure.
8. An appreciably higher "K" factor.
9. Thoroughly cleaned and dehydrated.

KOLD-HOLD

Jobbers in Principal Cities

PROCESSING **TRANSPORTATION**
protects every step of the way

STORAGE

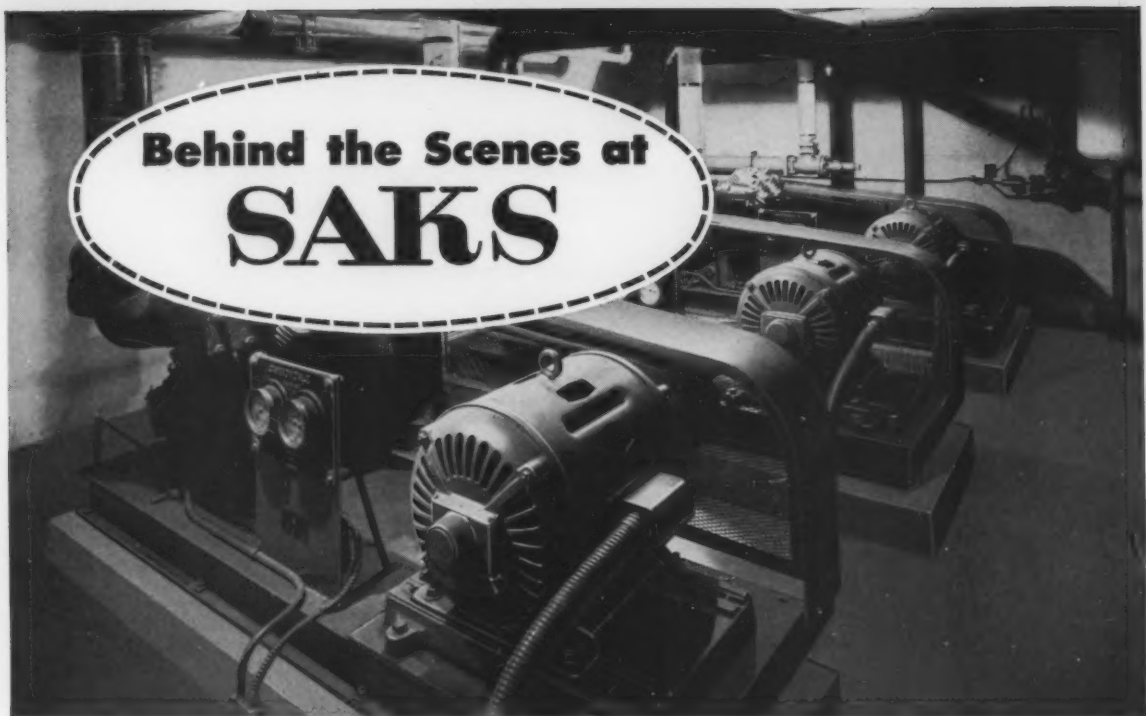
KOLD-HOLD MANUFACTURING COMPANY

503 E. HAZEL ST., LANSING 4, MICHIGAN

MARCH, 1948

23

Behind the Scenes at **SAKS**



Wagner Quality Motors help Build Patronage...

Operators of fashionable shops are quick to realize how well the installation of an air conditioning system can build patronage for their establishment. At Sak's 5th Avenue, in Beverly Hills, customers relax and shop in cool comfort—thanks to the efficient air conditioning system pictured above.

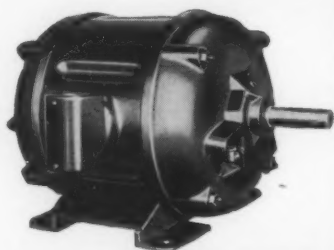
Air conditioning engineers specified, and used, Wagner Motors in this installation... as in thousands of industrial, commercial and home applications... because of their unfailing dependability! Dependable continuity of operation, outstanding service and economy are qualities found in every

Wagner Motor. That's why you see Wagner Quality Motors on the job everywhere, driving all types of apparatus that help people live in year 'round comfort.

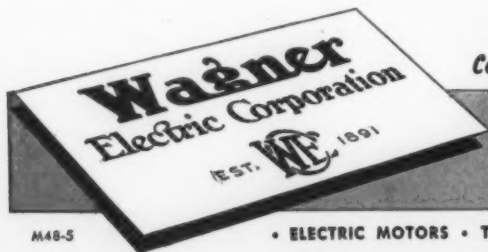
Hundreds of equipment manufacturers have standardized on these outstanding motors. Wagner can help you, too. If you manufacture or use motor-driven equipment, it will pay you to investigate Wagner Motors. Quick, convenient, nationwide service facilities are available to users of Wagner Motors. Twenty-nine branch offices, located in principal cities, are ready to give you service and advice. Contact our

nearest office, or write us for bulletins on the complete line.

Wagner Electric Corporation
6442 PLYMOUTH AVE., ST. LOUIS 14, MO., U. S. A.



The motor illustrated above is typical of the Wagner complete line of polyphase and single-phase motors.



M48-S

Consult Wagner Engineers on all Electric Motor Problems



• ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL BRAKES • AUTOMOTIVE PRODUCTS •

THE REFRIGERATION INDUSTRY

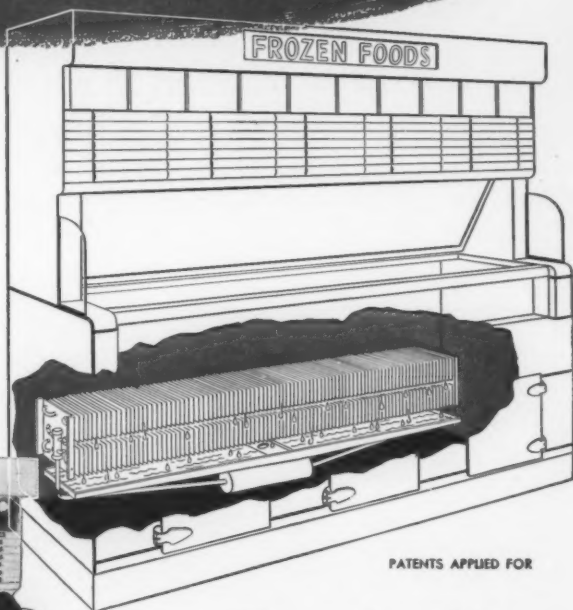
First Again

TYLER BUILT-IN AUTOMATIC DEFROST SYSTEM

ON THE 1948 TYLER OPEN
FROZEN FOODS DISPLAY CASE!



1948 Tyler open, self-service, welded-steel FROZEN FOODS DISPLAY CASE. New Automatic Defrosting! New full-color food display cards! New flexible pricing system! New mass display of merchandise—with mirror and visible front!



First again—with a built-in Automatic Defrost System on the 1948 version of the famous Tyler Frozen Foods Display Case—the open, mass display case that revolutionized the merchandising of frozen foods back in 1945!

Tyler Automatic Defrosting will also be a feature of the 1948 Tyler Open Self-Service Meat and Dairy Case.

IT'S
TYLER

FOR FOOD REFRIGERATION

FAMOUS TYLER FIRSTS: first to use welded-steel construction in the commercial refrigerator field; first to employ modern, assembly-line methods; first with sectional, steel-clad Cooling Rooms; first with open, self-service Frozen Foods Display Cases; first to use multiple plants in the manufacture of commercial refrigerators; first with built-in Automatic Defrosting on open refrigerated display cases!

TYLER FIXTURE CORPORATION, NILES, MICHIGAN

HEAT
TRANSFER
PROGRESS

CHAPTER ONE

We split hairs

to give you more for your heat transfer dollar



1/10,000 OF AN INCH—a fraction of a hair's breadth...is the tolerance we maintain in our new precision machine shop, where we make our own tools and dies.

Yes, we're sticklers for details...because they all add up to better value for you. Making our own tools and dies to the highest standards of accuracy is the first step in our modern "assembly line" production system.

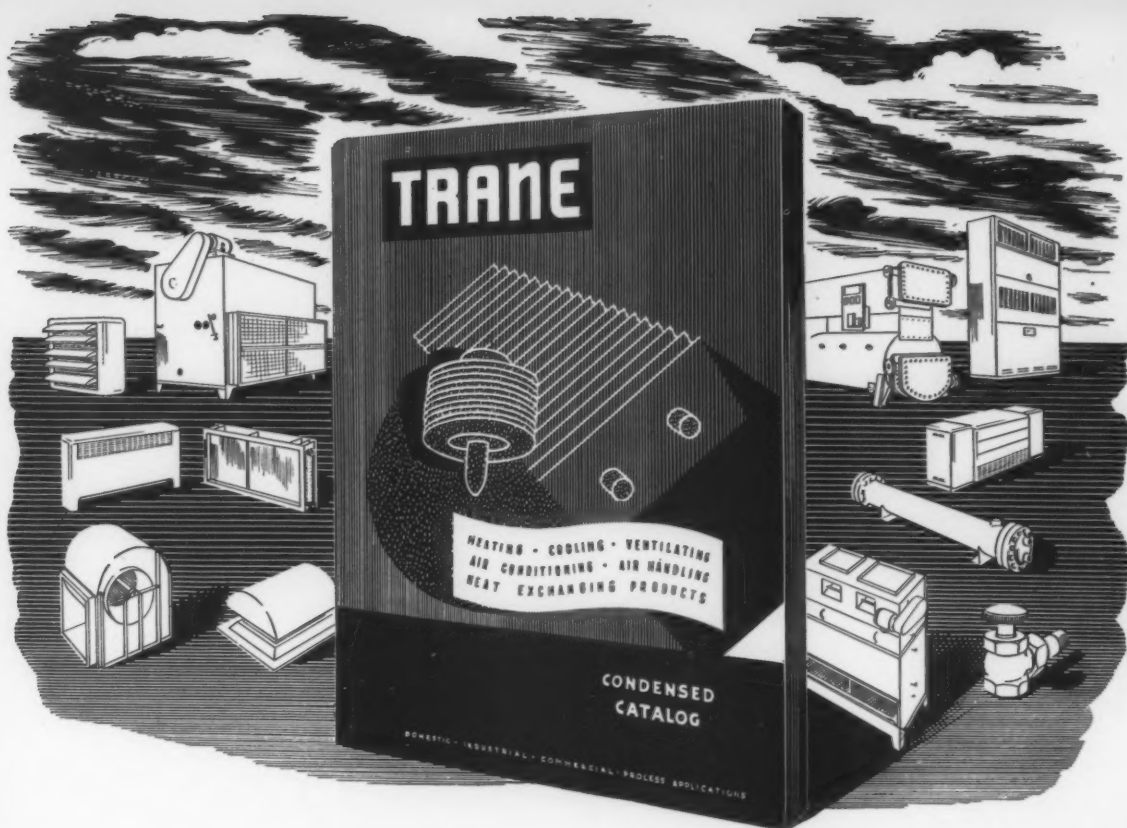
RESULT:

- **Interchangeable parts**—for easy replacement in the field.
- **Uniform performance**—every unit equally dependable.
- **More efficient production**—which means we can build more quality and value, dollar for dollar, into every Marlo product.

Marlo IS THE MARK
OF HEAT TRANSFER PROGRESS

MARLO • HEAT TRANSFER
Since 1935

MARLO COIL CO. / ST. LOUIS 10, MO.



More and More Jobs Need Heating and Cooling . . . BE READY TO HANDLE Both...WITH TRANE PRODUCTS

Job after job now calls for both heating and cooling. Since the functions are so closely allied, often being accomplished with much of the same equipment, heating and air conditioning *must* be considered together.

Architects, engineers, and owners prefer a minimum of contracts and responsibilities — so the contractor who can bid on the whole job has a much greater chance of getting it. The contractor who cannot bid on the whole job may likely lose it to one who can.

Heating and air conditioning are so closely related, from figuring the job through installing it, that it is only logical for the contractor to grow with the industry by combining heating and air conditioning. In this way, the contractor has peak business the year around, and is assured of a steadily increasing market

in remodeling and modernization work, as well as in new construction. Just as the contractor needs both heating and air conditioning to make his service complete, the heating and air conditioning industries need additional contractors so that they can expand to meet the enormous demand.

Trane is the ideal source of supply for the independent contractor who combines heating and air conditioning. The complete Trane line includes every necessary product for entire heating and air conditioning systems — giving the contractor the undivided responsibility of *one* manufacturer. Trane field engineers in 85 field offices are constantly available for help and advice in any phase of heating and air conditioning.

TRANE

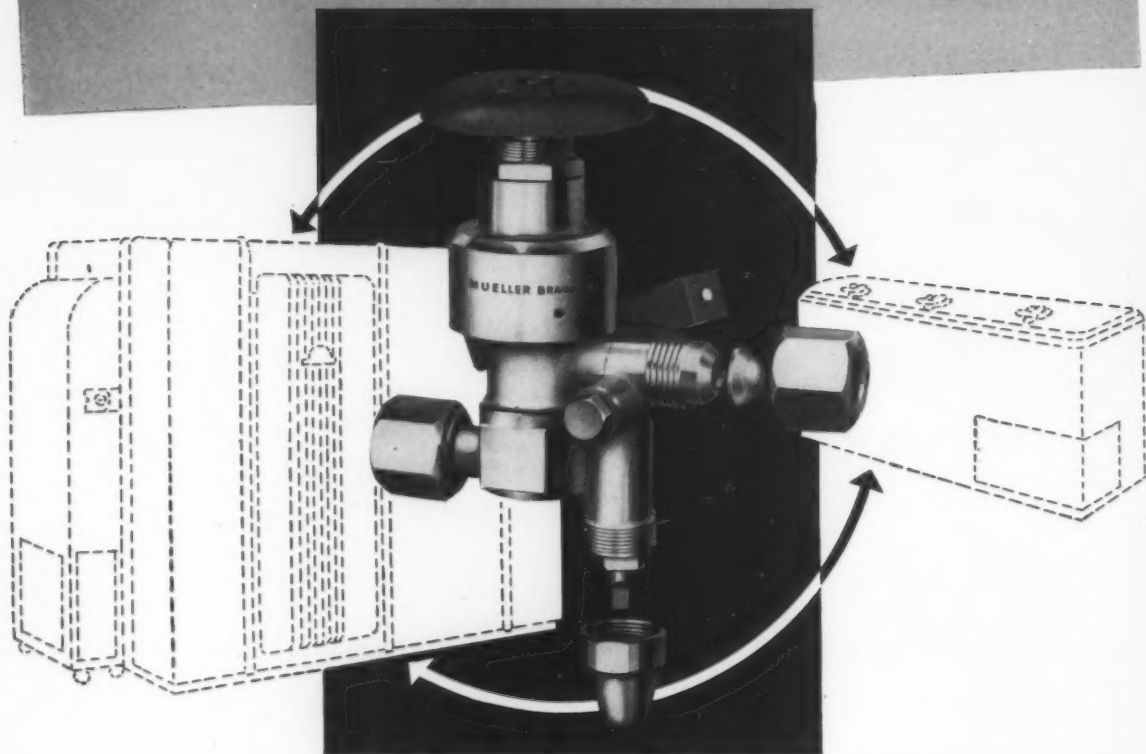
Manufacturing Engineers of Equipment for
HEATING AND AIR CONDITIONING

THE TRANE COMPANY, LA CROSSE, WISCONSIN • Also TRANE COMPANY OF CANADA, LTD., TORONTO, ONTARIO



MUELLER BRASS CO.

Two-Temperature Control Valve



● The Mueller Brass Co. Two-Temperature Control Valve is used in a refrigerating system where one compressor cools more than one unit and where it is desirable to more accurately control temperatures in the various units. It closely maintains a pressure in the coil at a level above the operating pressure of the machine.

An exclusive feature of this valve is the provision for by-passing the automatic valve in case it is desired to pump all the refrigerant from the coil. By means of this by-pass arrangement, the automatic valve can, in effect, be cut out of the system and the coil opened directly to

the suction line. Provision is also made for the attachment of a pressure gauge while the line is under pressure.

There is no limit to the number of valves that can be installed on one system. When several boxes are to be maintained at different temperatures, the Two-Temperature Valves are installed on the higher temperature units.

An oval handle, which is independent of the automatic closing feature, provides manual closing and eliminates the use of a separate line valve.

Valves are furnished 1/2" and 5/8" flare.

MUELLER BRASS CO.

PORT HURON, MICHIGAN

you can fill MORE V-Belt orders with this carefully selected assortment.

Gilmer
#355

**V-Belt Assortment
of
50 Most Popular
sizes**



DESIGNED for USE in SHOP or TRUCK

Here's a V-Belt assortment that's a sure profit maker. This is being proved every day in shops and stores and service trucks throughout the country. It will bring good profits to you. For among the 50 Gilmer V-Belts are all the most frequently requested sizes...covering hundreds of applications.

The Gilmer #355 V-Belt Assortment gives you, in one compact unit, the foundation of

a complete V-Belt department...in minimum space...with a minimum investment...and with all the valuable service aids shown at the right.

You can sell Gilmer V-Belts with confidence, knowing that you are giving your customers the best belts money can buy. Gilmer V-Belts are noted for accurate fit, firm grip and long life. They are made in all standard refrigerator sizes.

*Gilmer #355 Assortment
includes all these . . .



1-2 50 Assorted
V-Belts
8-Hook Metal
Wall Rack



3 Gilmer Handi-
meter (patented)
for quick measuring
of belts



4 Gilmer V-Belt
Catalog, "America's
Belt Bible"



5 Inventory Card



6 Window Display Card



Your Gilmer Distributor carries a complete stock of replacement belts. Order the #355 Assortment from him today, or write direct for further particulars.

BUY THROUGH YOUR GILMER DISTRIBUTOR

L. H. GILMER COMPANY, Tacony, Philadelphia 35, Pa.
Division of United States Rubber Company

Switch to PENN



for Dependability!

Star Features of the Penn 270

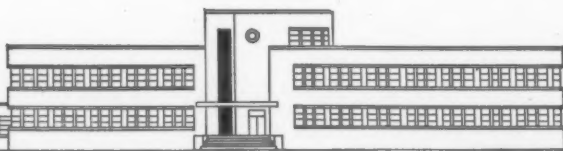
- ★ It's two switches in one—the first and only refrigeration control with double-pole construction—for greater versatility and protection.
- ★ Direct-reading visible calibrated scale shows operating cut-in and cut-out points...no addition or subtraction required.
- ★ Calibration or accuracy of performance not affected by vibration or mounting position.
- ★ Wide range of differential adjustment in one model...Three temperature ranges cover all requirements.
- ★ Sturdy contact mechanism with better electrical performance...Large block assembly with terminals molded internally for strength and permanence.

Write now for full details on the Penn 270 Series, the refrigeration control that sets a new standard of versatility...simplicity...efficiency...and *dependability*. **Penn Electric Switch Co., Goshen, Indiana.** Export Division: 13 E. 40th St., New York 16, U.S.A. In Canada: Penn Controls, Ltd., Toronto, Ontario.



Series 270 and 272 PENN "Single" temperature or low side pressure controls. Also (not shown) Series 271 and 273 PENN "Dual" Controls which combine a temperature or low side pressure actuated mechanism and built-in high-pressure safety cut-out.

PENN



AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, ENGINES, PUMPS AND AIR COMPRESSORS

THE REFRIGERATION INDUSTRY

BTU

News • Laws • Trends

● **Here's a "Demand" Market.** A recent survey by one of the leading magazines in the frozen food field has revealed some rather startling facts which should be of vital interest to every merchandiser of commercial frozen food storage equipment.

Restaurants and hotels, this survey indicates, are well pleased with frozen foods and use them regularly. This much is not news. What is news is the fact that in many cases the use of frozen foods by these establishments is definitely limited by lack of adequate storage facilities. Many of these establishments reported that they would gladly use more frozen foods if they possessed sufficient low-temperature storage facilities to hold these foods in larger quantities.

That makes it look as if the frozen food people have done a selling job that has completely outstripped the efforts of the refrigeration industry, doesn't it? But at least we can thank them for setting up the ducks in the shooting gallery!

● **Guess Again!** One of the big problems involved in employer-employee relations always has been the wide discrepancy between what the worker actually wants and what the boss thinks he wants. In an effort to test the correctness of the executive impression, and to determine what the average employee really wants most out of his job, the National Retail Dry Goods Association recently submitted a list of eight questions to some 3000 employees and then put these same questions to several hundred executives. The results, which are shown below, speak for themselves.

What employees say they want

- 1st— Credit for work they are doing
- 2nd— Interesting work to do
- 3rd— Fair pay and salary increases
- 4th— Understanding and appreciation
- 5th— Counsel on personal problems
- 6th— Promotion on merit
- 7th— Pleasant working conditions
- 8th— Job security

What supervisors think they want

- 7th
- 3rd
- 1st
- 5th
- 8th
- 4th
- 6th
- 2nd

● **Refrigerated Vendors Expanding.** A new and steadily growing market for the sale of canned fruit and health juices through automatic merchandising was foreseen by Jack H. Cross of Telecoin Corp. in an address on the automatic merchandising of fruit and vegetable juices

given at the recent National Automatic Merchandising Association convention in Chicago.

He pointed out that Florida fruit growers alone produced 90 million boxes of citrus fruits last year, and that the figure is expected to reach 150 million within five years. Texas and California he viewed in like proportion. Supplies of other juices will also increase, he asserted.

Growers and juice producers see in the automatic vendor a vehicle and a program which will open to them additional outlets for their packs, and are already lending enthusiastic cooperation to the development of the new operation.

Three fruit juice vending machines have just been introduced to the market, and are expected to be in full production early in 1948. The "Tele-Juice" machine offers the customer his choice of six flavors. The machine operates on a gravity principle, dispensing 300 cans of electrically-refrigerated canned juices. The Snively "Dispen-so-lator" offers one flavor, vending the drink in a sanitary paper cup. United States Vending Corp. will shortly introduce its "Automatic Store" or "Pik-Ups," to vend either fresh or canned juices.

● **Cooling Has Its Ups and Downs.** The Chicago Tribune has installed an experimental cooling unit in one of the express elevators in the Tribune Tower. This is believed to be the first of its kind, and tests show that the air cooled car appears to average about 10 F cooler than the others.

To cool the single elevator, a complete room conditioner was placed atop the car. This draws air from the shaft, cools it, and introduces it into the car through louvers. It is drawn out through other louvers. Elevators in the tower regularly are ventilated by fan induced air from the elevator shafts.

● **Where Will You Be in 1958?** "The next 10 years belong to the salesman," the National Electrical Retailers Association tells its members, citing the fact that the 1948 market will be the largest in history, with the buying public possessing an estimated surplus income in excess of \$94 billion dollars.

Despite this fact, the association warns, there will be a full quota of business failures during 1948. Whether or not any particular business survives, it points out, depends upon the following four factors: (1) how well it capitalizes on direct customer contact; (2) how well it services the customer beyond the point of sale; (3) its ability to secure quality merchandise that it can sell competitively; and (4) how well it keeps abreast of current changes in business pace.

Think it over! Will YOUR business be a going concern in 1958?

● **Home Freezers Can Help.** A four-point program based on the use of the home freezer has been worked out by the home economics department of Crosley Div. to help the American housewife conserve the nation's food supply during 1948 and to save money in the process.

Continued on page 60



Photo by Austin Jones, Kerotest Mfg. Co.

Show Chairman Jim Hood cuts the ribbon which opened the exposition hall to visitors.

The Show in Review...

THE BEST one yet—that sums up the opinion of both exhibitors and visitors at the Fifth All-Industry Refrigeration & Air Conditioning Exposition.

While attendance at the Show was smaller than at the previous one, exhibitors didn't suffer, because everybody who came to the Show was a customer. Unofficial attendance estimates set the number of Show-goers at about 10,000.

Scores of new products were introduced at the Show—more than at any previous affair of its kind. Most exhibitors also agreed that it was a "buying" Show; a number of them said they had experienced more activity during the first two days of this one than all during the previous Show.

No immediate decision was announced as to the time or place of the next All-Industry Show, which has tentatively been set for November of 1949. A special committee is studying the matter and polling exhibitors to determine their wishes in the matter before a definite announcement is made.

AS ALWAYS, the Show served as a focal point for the interests of virtually all of the industry's organizations, several of which held their annual meetings in conjunction with the Exposition. Reports of the convention activities of the National Association of Refrigeration Contractors and the National Commercial Refrigerator Sales Association appear on pages 44 and 79, respectively, of this issue, in the separate departments regularly devoted to those groups. A review of the meetings of the Refrigeration Equipment Wholesalers Association and the Refrigeration Service Engineers Society commences on the following page.

REWA

Harold G. Stern, Refrigerative Supply, Inc., Seattle, was elected president of Refrigeration Equipment Wholesalers Association at the 13th annual meeting of the organization held Jan. 27 in Cleveland during the All-Industry Show.

H. W. Holt, Orr, Inc., Pittsburgh, was named vice president; F. R. Pond, Refrigeration & Industrial Supply, Minneapolis, secretary; and J. P. Glass, Chase Refrigeration Supply, Chicago, treasurer.

Directors are George J. Roche, Roche & Hull, Baltimore, immediate past president of REWA; B. V. Blazer, M. Blazer & Son, Passaic, N. J.; N. W. Edwards, Refrigeration & Power Specialties, San Francisco; C. W. Eskridge, Henry V. Dick & Co., Charlotte, N. C.; E. C. Marsden, Marsden & Wasserman, Hartford, Conn.; J. M. Mideke, Mideke Supply Co., Oklahoma City; J. D. Ross, Thermal Controls, Ltd., Montreal; and R. E. Warwick, Plumbing Wholesale Co., Jackson, Miss.

REWA's membership now has grown to 180 members, operating a total of 300 wholesale establishments.

At the meetings, presided over by retiring president George J. Roche, members heard Ted Glou, a past president of REWA, emphasize that it is important for wholesalers to set up an aggressive merchandising program in 1948. Pointing out that there are today about 40% more parts and equipment wholesalers in the field than before the war, many of them branches of larger concerns, he said that competition for the customer's dollar will be tougher this year, both from within the industry and from without.

"The dollars are there, and the desire is there," he said. "It's up to us in the refrigeration field to make the customer buy from us rather than from other outside interests who are competing for those dollars. We've got to make him buy refrigeration items first, and then other goods."

"Wholesalers will need to know the facts in 1948," Harold McCombs, Denver wholesaler, declared in making a plea for greater cooperation by REWA members in the association's effort to assemble more complete information on wholesaler activities. McCombs stressed the importance of

Continued on page 65

WE WANT TO EXPLAIN

IN SELECTING editorial material for this issue, we had to choose between two things: (1) descriptions of new products introduced at the All-Industry Show, and (2) photos of exhibits and scenes at the Show. It was a tough choice, but believing that we could best serve our readers by bringing them "What's New," we are covering new products news as fully as possible. This meant, of course, that comparatively few booth or "color" scenes could be used. We hope you'll understand.

—The Editors

REWA Officers and Directors



Photo by Austin Jones, Kerotest Mfg. Co.

Here are REWA'S new officers and directors for 1948. The officers (seated) are: J. P. Glass, Chase Refrigeration, treasurer; H. G. Stern, Refrigerative Supply, president; H. W. Holt, Orr, Inc., vice president; and F. R. Pond, Refrigeration & Industrial Supply, secretary. REWA directors (standing) are: E. C. Marsden, Marsden & Wasserman; George J. Roche, Roche & Hull; J. D. Ross, Thermal Controls, Ltd.; H. S. McCloud, executive secretary; R. E. Warwick, Plumbing Wholesale Co.; Ben V. Blazer, M. Blazer & Son; C. W. Eskridge, Henry V. Dick Co.; and J. M. Mideke, Mideke Supply Co.

RSES Officers and Directors



Photo by Austin Jones, Kerotest Mfg. Co.

Newly elected officers and directors of the Refrigeration Service Engineers Society gather at the group's banquet staged in conjunction with its 10th annual convention and the All-Industry Show. Front row, left to right: Paul B. Reed, chairman, international education committee; A. L. Robertson, 2nd vice president; Charles C. E. Harris, 1st vice president; William J. Marshall, president; Harold T. McDermott, secretary; Walter E. Booth, sgt-at-arms. Rear row, left to right: William Tierney, C. Neisel, J. L. Driskell, Napoleon Brossolt, Floyd Lilley, G. S. Tucker, Earl Yockey, and Cecil Visger. M. R. Hanks, new RSES treasurer, was not present when this photo was taken.

MORE NEW PRODUCTS

from the All-Industry Show

Ice Cube Maker Added By LaCrosse Cooler

Designed and engineered as a companion piece to La Crosse Cooler Co.'s line of dry storage bottle coolers, a 21-tray self contained ice cube maker, complete with storage compartment, was the stellar attraction



in that company's display. Capable of producing approximately 42 pounds of ice per freezing, this unit also provides space for the storage of approximately 3 bushels of ice, or roughly 900 cubes, plus 294 cubes in the trays. Stainless steel slide-away doors also provide access to the top section, while an orthodox hinged door is used on the bottom compartments.

Alco Shows Valves for Reverse-Cycle Use

Alco Valve Co. introduced and featured in its display two new control devices—the 3-way and 4-way “change-over” valves for automatic control of reverse-cycle refrigeration. The valves were shown in operation in a miniature heat pump system.

Alco's Type 732 snap-action suction valve or regulator, designed for close temperature control without the usual wiring or accessories, was exhibited in operation in a two-temperature case. It is used on display

cases, vegetable storage, beverage and water coolers, soda fountains and many other two-temperature applications.

In addition the display included Alco's complete line of engineered refrigerant controls, thermo expansion valves, multi-outlet thermo valves, solenoid valves for many uses, evaporator pressure regulators, float switches, high pressure float valves, and line strainers.

New Flaring Tool Works Without Scoring Tubing

A new advance in flaring tools which makes it possible to flare tubing without scoring it was featured by Imperial Brass Co. This new unit features a new die holder assembly with sliding dies, making for increased compactness and easier use. Covers all popular sizes of tubing from 1/4-inch to 5/8-inch. Flares soft copper, brass, and aluminum tubing. Extra depth, smooth surface dies hold tubing tightly without scoring. Regular Imperial “Slip-on” yoke fastens over die holder at point desired.

Victor Introduces New Commercial Case Line

Victor Products Corp. displayed for the first time at the Show the new series of commercial refrigerators which it has recently announced for national distribution under the name “Coldpoint.” Newest product was a refrigerated candy display case; other products included ice makers, milk coolers, sectional walk-in rooms, dry storage beverage coolers, and a frozen food display cabinet.

The company said that the “Coldpoint” line will be sold through franchised distributors in exclusive sales

territories. Applications for sales franchises are now being accepted.

Three New Cooler Lines Introduced by Peerless

Peerless of America, Inc., introduced at the Show three new lines of cooling units: Cascade, Dome and Unit types.

The Cascade cooler series is said to combine for the first time radiant and convection cooling, the ornamental casing of the motor driven unit



being used as cooling surface. In this series, fins are attached to the rear of the front panel by means of the copper tube carrying refrigerant. Warm air is drawn in at the top, cascaded over the coils and discharged downwardly from the face of the unit. Entire front of the unit, it is said, radiates cold to products without dehydrating blasts of air. Unit (illustrated) hugs the back wall of the cabinet, saving storage area.

In the Dome cooler, air is drawn up in the center of the unit and discharged horizontally along fixture ceiling to drop down the side walls. This unit is designed to maintain high humidities in reach-in and walk-

in units, and to occupy a minimum of space.

The Unit cooler series utilizes a "pie plate" design, with motor mounted in the center of its round coil, and all primary and secondary surface located in the air stream. No waste surface is the result of this design, the company claims. There coils are intended for installation in all types of fixtures and walk-in coolers where general refrigeration is required.

Kerotest Adds 5 New Valves To Line

Stealing the spotlight in the booth of Kerotest Mfg. Co. were five new valves which that company recently had added to its expanding line of refrigeration accessories. These new valves included an in-line two-way refrigerant shutoff valve, a variable bolt hole compressor valve, and in tegral forged manifold, a new light-weight globe valve, and a double port compressor valve.

General Controls Shows New 1/2-Ton Valve

General Controls introduced two new products: a 1/2-ton (V-200 series) thermal expansion valve and a K-20-5 electro-magnetic valve. The expansion valve handles capacities of



1/2 ton Freon or 1 ton methyl chloride or sulphur dioxide.

The V-200 1/2 has a liquid filled bulb, allowing for inside freezer installations, in any temperature or back pressure. It features a changeable orifice for fractional tonnage operations, similar to other valves in the V-200 series. Bulb size (3/8")

permits use in standard bulb wells. Outlet connection is optional, 3/8" flare or 1/4" I.P.S. Applications include freezers, beverage coolers, and others where limited space is available for valve mounting.

The new K-20-5 electro-magnetic valve is especially designed for refrigerant control, but also may be used for controlling air, water, gas, light oil, etc. It controls suction lines or high pressure liquid lines, and is said to assure tight shut-off for fractional tonnage installations. Internal parts are of bronze and stainless steel.

Typhoon Shows Console Models In Smaller Sizes

A compact 1 1/2 and 2-ton console type packaged air conditioner was featured in the display of Typhoon Air Conditioning Co., Inc. A radical new arrangement makes possible a full-sized coil, motor, compressor, and condenser in a smaller unit than the company's previous models. One removable cover exposes the entire mechanism for easy inspection and maintenance. Tilted air outlet insures even distribution of conditioned air over a large area. Individual thermostats provide automatic control. Unit can be used either by itself or in connection with a duct distribution system. Provision is made for a separate fresh air duct if desired.

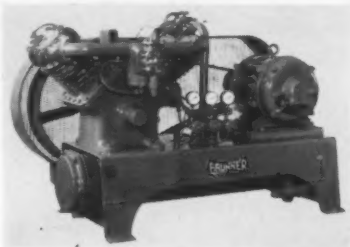
Brunner Unit Equipped With Capacity Control

Shown for the first time by Brunner Mfg. Co. was a 10 hp condensing unit equipped with capacity control known as a "suction valve unloader."

WE CONTINUE, in this issue, our coverage of New Products introduced at the Fifth All-Industry Show. Since New Products were the "big news" of the Show, and, we believe, "big news" to our readers, too, we are devoting all possible space to them this month, in an effort to cover as wide a range of individual items as we can. For more information on any of the New Products listed, write to this magazine. We'll be glad to forward your requests to the manufacturers concerned.

By means of this device, the operator is able to meet air conditioning problems to a much closer range tolerance than in any manner previously developed, it is claimed.

In this device the unloader control valve controls the operation of the unloader piston. When the correct



combination of suction gas pressure below the diaphragm and spring pressure above the diaphragm is obtained, the valve opens and admits discharge pressure to the top of the unloader piston. The valve can be made to open at any suction pressure by setting an adjustment screw.

The capacity control device is designed to meet conditions where the starting load may be much greater than the holding load required after the product or material has been reduced to the holding temperature, and is said to obtain economies in operation greater than other methods used heretofore.

"American" Food Freezers Redesigned for 1948

American Refrigerator & Machine, Inc.'s, line of "American Beauty" freezers has been refined for 1948 to incorporate new features, conveniences, and operating economies. The line is available in three size ranges:

Continued on page 69



See your **KEROTEST** Wholesaler

—It's Like Having Our Plant in Your City!

Your Kerotest Wholesaler is our representative in your locality as truly as a branch of our own plant. He carries a comprehensive stock of the entire Kerotest Refrigeration Valve and Fittings line and he is up-to-date on the latest "know-how."

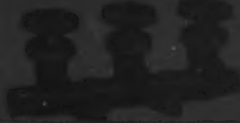
Look to your Kerotest Wholesaler to keep you posted with the latest developments in refrigeration valves and fittings—for new technical data or advice and—for immediate supplies

of the latest and finest in valves and fittings—KEROTEST.

Take advantage of the prestige Kerotest lends to your jobs. Every installation . . . every replacement made with genuine Kerotest Valves and Fittings identifies you as a craftsman who knows and uses the best. For every refrigeration problem . . . for every need . . . see your Kerotest Wholesaler! Kerotest Manufacturing Company, Pittsburgh 22, Pa.

KEROTEST

First with the latest in Valves...



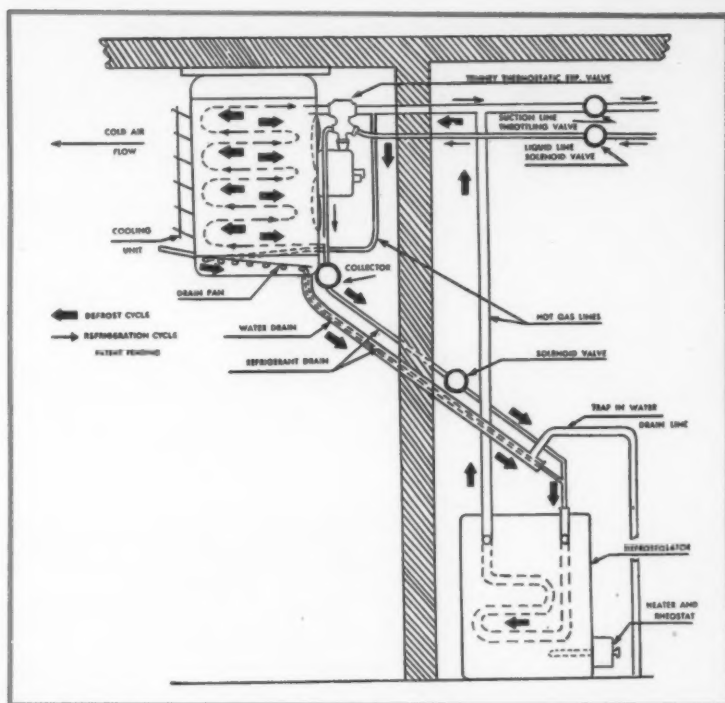
NEW DEFROST SYSTEM

FEATURES CLOSE CONTROL

By Thomas L. Warren

Engineering Dept.
Tenney Engineering, Inc.

Here is a practical, step-by-step discussion of the features and functions of a new development in the field of automatic defrosting for evaporators used in low temperature applications.



AN entirely new approach to the problem of automatic defrosting of low temperature evaporators is exemplified in the new "Defrost System*" which has been announced by Tenney Engineering, Inc.

With this unit, it is now possible to obtain all the advantages of the automatic hot gas defrost system without any of the objectionable features usually associated with this method of defrosting low temperature evaporators. Reference to the diagram (Fig. 1) shows the relation of the various components in the new system together with the complete separation of this system from the condensing unit.

Operation of this new system does not result in an excessive temperature

speed of defrosting are provided rise in the refrigerator. This feature is attributable in part to the speed with which the defrosting is accomplished and in part to the accurate control in timing the defrost and refrigeration cycles. Extremely accurate control of these cycles is effected through the unique employment of simple, readily obtainable standard units.

Sole aim in the design of this system was to make it as simple, economical, and foolproof as possible. The system is so arranged that it is not necessary to connect into the discharge side of the compressor. Defrosting capacity and the speed at which defrosting occurs is not limited by the size of the condensing unit, but variations in both capacity and

through simplified controls.

As noted on the diagram, an important component of the Tenney Automatic Defrost System is the "Defrostolator*", (Fig. 3), arranged for floor mounting outside of the refrigerator. This unit consists of an insulated copper tank suitable for holding a fixed quantity of water, a heat exchange surface within the tank, and a low wattage electric immersion heater.

Controls for the system consist of a remote bulb thermostat, a rheostat shown mounted on the outside of the insulated Defrostolator, and a manual switch which can be set for operation on either the automatically alternating defrost and refrigeration cycles or for straight refrigeration without the automatic defrost feature. A start-

*Pat. Pending

ing load throttling valve is furnished for the main suction line, shown at the top right in the diagram. Two small size solenoid valves are supplied, one for the main liquid feed line and the other for the refrigerant drain line from the collector under the cooling unit to the Defrostolator, also shown on the diagram.

The cooling unit (Fig. 2) is especially designed for most efficient operation with the Defrostolator. It contains a special circuit finned coil, and is equipped with a collector for holding a fixed quantity of refrigerant. The collector is mounted under the unit, in the liquid refrigerant drain line to the Defrostolator. It will be noted in the diagram that the unit is supplied with a false bottom, which is mounted on a hot refrigerant coil to provide quick and complete defrosting at this point during each defrost cycle, and which also includes a drain pan connected to a $\frac{7}{8}$ " drain line. Each unit is also equipped with a Tenney thermostatic expansion valve.

Here's How It Works

The method of operation of the new Tenney Automatic Defrost System is as follows:

The fixed quantity of water in the Defrostolator is heated to a predetermined temperature by a low wattage electric immersion heater during the refrigeration cycle. The rate of heat flow, and, therefore, the length of the refrigeration cycle, is controlled by a rheostat through which the amount of current passing to the immersion heater can be varied as desired.

When the pre-determined temperature of the water in the Defrostolator is reached, the automatic thermostat opens the solenoid valve in the refrigerant drain line to the Defrostolator and closes the solenoid valve in the liquid feed line, at the same time shutting off the condensing unit and the fan on the cooling unit.

At the start of the defrost cycle, a small amount of liquid refrigerant is contained in the unit cooler and in the collector mounted under the cooling unit. Due to this liquid head and the high temperature maintained in the Defrostolator, hot refrigerant gas passes through the defrost line and is divided, part going to the cooling unit and part going to the coil under the false bottom of the drain pan.

The hot gas thus divided provides

This "Defrostolator" is the heart of the Tenney system. It consists of an insulated copper tank suitable for holding a fixed quantity of water, a heat exchange surface within the tank, and a low-wattage immersion heater. Location of this unit in relation to the evaporator shown above is indicated in the diagram on the preceding page.

simultaneous defrosting of both the cooling coil and the water drain pan. The cold surfaces of the evaporator and drain pan cause the hot refrigerant gas to cool and condense, thus imparting its sensible and latent heat to the ice-covered surfaces. The melted ice drains from the cooling unit through the $\frac{7}{8}$ " drain line to a waste water reservoir adjacent to the Defrostolator outside the refrigerator.

The warm condensed refrigerant drains by gravity through the defrost drain lines back to the Defrostolator, where it is reheated and vaporized to repeat the cycle. It will be noted in the diagram that the defrost drain

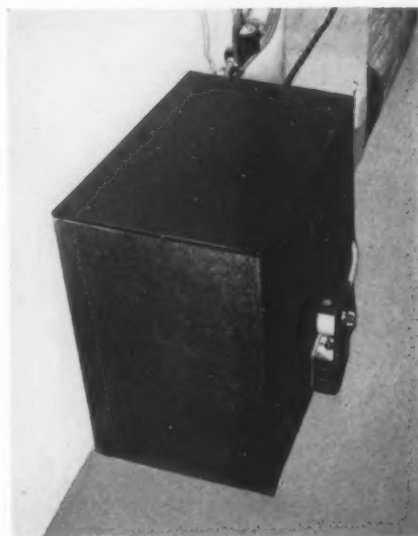
line from the drain pan coil is carried inside of the water drain line to a point outside of the refrigerator, to assure complete drainage during each defrost cycle. The fixed quantity of water in the Defrostolator has sufficient heat storage capacity for maximum load conditions for the specific installation.

The temperature differential of the thermostat control unit is so adjusted that it cuts out when the evaporator coil is completely defrosted, simultaneously closing the solenoid valve in the refrigerant drain line, opening the solenoid valve in the liquid feed


Continued on page 62



This is the low-temperature evaporator which has been especially designed for most efficient operation in connection with the Tenney defrosting system.



A Service Manual by *Raymond W. Smith*

[illegible][illegible]

The 3046 ball bearing is shown in a perspective view. It is a standard deep groove ball bearing with a flange on one side. The diagram is used to illustrate the correct hole spacing for mounting on a shaft.

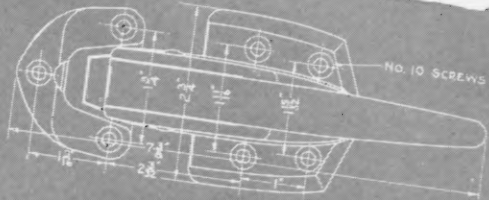
Two holes are shown on a shaft passing through the bearing. The distance between the centers of these two holes is labeled as $1\frac{1}{2}$ times the hole diameter. This dimension is shown with a dimension line and arrows pointing to the hole centers.

Below the bearing, there is a small inset diagram showing a cross-section of the bearing and the shaft. It highlights the relationship between the hole diameter and the shaft diameter, indicating that the hole should be a tight fit on the shaft.

15365 Reversible Hinge

IMPORTANT: Always check offsets required. See diagram

- A Money-Making
NATURAL!



No. 4718 REVERSIBLE LOCK
Same power and capacity as No. 4720, but designed with shorter base to fit panelled or glazed display cabinets. Operates at the touch of a finger—but when it trips, it grips! Forged brass handle, extruded brass bolt. Use with Strikes No. 3842 or 3839.

No. 15331
REVERSIBLE HINGE
Designed especially for glazed display doors of moderate size. Two Oilite bronze bushings and the stainless steel pin assure silent lifetime operation. Butt and leaf of special zinc alloy, cast under hydraulic pressure. Offsets $\frac{3}{4}$ ", $\frac{1}{2}$ ", $\frac{1}{4}$ ". **No. 15341**, identical in appearance, provides 135 degree stop with offsets of $\frac{3}{4}$ ", $\frac{1}{2}$ ", $\frac{1}{4}$ ". Also available in 105 degree stop in offsets of $\frac{1}{2}$ " and $\frac{1}{4}$ ".



AVAILABLE THROUGH
YOUR JOBBER

There's an extra-profit opportunity for YOU, Mr. Service Man . . . in replacing obsolete, loose-fitting, broken down locks and hinges on commercial refrigerating equipment.

This free manual tells you how to cash in . . . how to suggest and sell good-looking , efficient new fittings . . . how to specify, how to install.

You can easily double your present income . . . make new service customers . . . by following these simple tips and clear instructions. Get on the gravy train . . . add a substantial profit to your service charges. Ask your jobber for this manual. If he can't supply, drop us a postcard TODAY for your free copy.



MAKERS OF THE LOCKS
with the
Living Action

Grand Rapids Brass Company

Makers of Dependable Refrigerator Hardware for over 40 Years

Grand Rapids 1, Michigan

HERE'S HOW THEY'RE MADE

— No. 2 —

Cold Plates

OF COURSE you know how to sell, install, or service all the various types of refrigeration equipment which you handle, or you wouldn't be in business. But do you have any idea of how this equipment is made? To enable you to more thoroughly understand these tools of your trade we are presenting here the second in a series of photographic "production reports." This picture story shows how plate type evaporators are manufactured by the most modern methods in the new plant of Kold-Hold Mfg. Co.



FIG. 2—These sheets then travel by overhead conveyor to the assembly line, where the two surfaces of each plate are lined up and a thin sheet of copper material is inserted between them. Thus assembled, the plates move to this hydrogen brazing oven where they are subjected to a temperature of 2500 F., which melts the copper so that it makes a perfect seal.



FIG. 1—Key innovation in Kold-Hold's manufacturing setup is an entire new hydrogen brazing process. Kold-Hold's "Serpentine" plates consist of two surface sheets—one flat, the other embossed to form channels for the passage of the coolant—which must be joined and hermetically sealed. Prior to the brazing operation, the pressed sheets are run through the steam cleaning cabinet shown here.



FIG. 3—An electric eye automatically controls the oven door so that it opens just long enough to allow each plate to enter. As an added precaution against moisture and impurities, each plate passes over an open flame just as it enters the oven.

FIG. 4—After the assembled plates leave the brazing oven they pass through this bonderizing cabinet where the exterior surfaces are carefully cleaned in an acid bath to make possible a better bond between the metal surface of the plates and the enamel finish.

FIG. 5—The bonderizing acid is removed from the plates when they pass through this special metal washing cabinet. Overhead conveyors are used to transfer the plates from one stage of this fabrication process to another.



FIG. 6—Here the plates are dried before a battery of infra-red lights. This quick drying method speeds production and facilitates handling in the later stages of the manufacturing process.



FIG. 7—Plates are spray-painted before this spray booth which carries away harmful vapors in the running water. Excess paint floats on the water's surface so that it can be removed and used again.



FIG. 8—The enamel finish is then baked on the plates by these infra-red lights at a temperature of 350 F, thus providing a durable finish. The completed plates are then carried by overhead conveyor to the warehouse, where they await shipment.

**Here's the 4-point service policy
of a dealer who realizes that**

Courtesy Counts

MORE and more household refrigeration service dealers, for one reason or another, are adopting a policy of "taking the shop to the job"—that is, of doing all work possible on the unit in the home, rather than pulling the refrigerator into the shop for repair.

While many service organizations have found this practice to be the simplest, least expensive way of handling their household business, they also have discovered that it requires an entirely different brand of customer relations. In this type of work the courtesy and respect shown to the housewife by the serviceman becomes almost as important as the serviceman's technical knowledge and mechanical ability.

Realizing this fact, Le Moine Bechtold, president of Le Moine's, Inc., an enterprising Denver, Colo. service organization, has worked out a four-point set of rules calculated to make his five servicemen ambassadors of goodwill who by their appearance and their actions will pave the way to return business from the customers on whom they call.

Here is the set of fundamental rules which Bechtold requires his servicemen to follow to the letter:

1. Well-groomed Appearance

In recognition of the fact that most housewives pride themselves on the



spotless condition of their kitchen, and consequently object strenuously to the presence of repair men in greasy, dirty clothes, all Le Moine's servicemen wear white coveralls which are lettered with the firm's name in blue on the backs.

Each man owns from three to five pairs of coveralls, which must be changed daily and sent to the laundry as soon as they are stained or soiled in any way. The firm pays one-half of the cost of laundering each man's uniforms.

In addition, Le Moine's also requires that each man report to work in the morning cleanly shaven, with shoes well shined, and wearing a uniform cap which is fresh and unsoiled.

2. Protection Against Soil

Every Le Moine's serviceman carries a large sheet of canvas which he



takes with him into the customer's home and spreads out on the floor around the appliance before starting in to work. This prevents any grease, oil, or other foreign matter from touching the floor or becoming spattered around the room.

Women invariably appreciate touches like this, Bechtold believes, and he is firmly convinced that the serviceman who leaves a home without having soiled its appearance in any way is the serviceman who will be called again if further work is needed.

3. Neat Handling of Tools

Le Moine's insists that each serviceman carry a large metal folding kit with sufficient compartments and



drawer space for all tools, small parts, and such equipment as may be needed. Tool kits are inventoried regularly, and all missing items are quickly replaced. In addition to the tool box, a minimum parts inventory must be carried in each serviceman's automobile. This inventory is checked weekly, and items are replaced as they are needed.

"Making a profit from service operations depends upon doing each job in the shortest possible time," Bechtold points out, "and you can't do that if you have to take time out to return to the shop for tools or supplies." Only in two instances, he proudly claims, has it been necessary for one of his servicemen to leave the customer's home with the job unfinished, and in each case his action was unavoidable.

4. Decals for Callbacks

Realizing the value of having the firm name and phone number readily available to customers when they again need service, Le Moine's has contracted for a supply of small but unusually attractive decalcomanias in red, gold, and blue. These decals bear the firm's name, address, and

Continued on page 63

THE *BIG THREE* OF 1948

NEW POST WAR MOTOR DRIVEN COILS



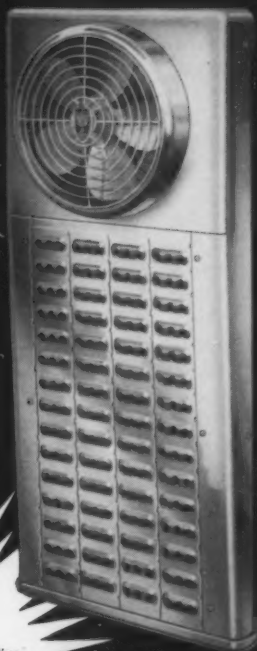
DOME COOLER

This forced air unit of nonferrous construction is entirely pre-engineered for simplified installation. It consists of a continuous circular off-center type coil and aluminum fins with copper tubing and integral capacity booster. Air enters bottom and is discharged radially from all sides. Cooler hugs ceiling, preventing direct air blasts. Occupies small space and delivers maximum BTU per dollar. For walk-in and reach-in coolers. Complete with built-in heat exchanger and suction spinner.



UNIT COOLER

In this streamlined beauty the motor is mounted in the center of a ROUND COIL — the new Peerless "Pie Plate," where all primary and secondary surface, even return bends, are in the air stream. No waste surface. Gentle air velocities give efficient cooling with this condensed package of refrigeration power. For use in all type fixtures and walk-in coolers. Complete with built-in heat exchanger and suction spinner. Air is blown through coil discharging horizontally.



CASCADE

"IT'S PEERLESS MADE"

Here radiant cooling and convection cooling are combined for the first time, the casing of this motor-driven unit being used as cooling surface. Fins are attached to rear of front panel by copper tubing carrying refrigerant. Warm air is discharged downwardly from front of unit after being cascaded over coils. No blasts of cold air to dehydrate products! For reach-in, walk-in coolers and backbars. Handsome in polished aluminum and complete with built-in heat exchanger and suction spinner.



Sold Through Leading Refrigeration Wholesalers
PEERLESS of AMERICA, Inc.

2901 LAWRENCE AVE.

CHICAGO 25, ILLINOIS, U. S. A.

CONTRACTORS

News • Activities • Plans

While *The Refrigeration Industry* is not the official publication of the National Association of Refrigeration Contractors, the Editors assign this space each month to the association. The information below is furnished, for the most part, by the offices of the association and its local affiliates.

Wright Named NARC President; Progress on Codes Reported

With upwards of 200 members in attendance, the annual meeting of the National Association of Refrigeration Contractors, held in Hotel Allerton on Jan. 26 and 27, was further evidence that NARC has gained increased stature during its second year and now ranks with the organizations accorded full recognition by the refrigeration and air conditioning industry.

E. S. Wright, of Youngstown, Ohio, was elected president of NARC for the coming year. He had served the organization ever since its inception as first vice president.

Elected first vice president was H. E. Wheeler, Chicago; J. H. Lessard, Seattle, was named second vice president; A. M. Palen, St. Paul, treasurer; Nathan Edelstein, New York City, recording secretary; and Ralph Lampie, Richmond, Va., sergeant-at-arms.

Directors who will serve NARC for the coming year are: Warren W. Farr, Cleveland, immediate past president of NARC; W. L. Drake, Indianapolis; James E. Perry, Detroit; C. R. Faulkner, Longview, Tex.; Lee Shirar, San Francisco; and F. J. Zoppel, Columbus, Ohio. J. J. Helminak is executive vice president.

Two morning business sessions were held, with afternoons left open so that members could attend the All-Industry Show. A press luncheon was held on Jan. 26, with representatives of the refrigeration trade press, wholesalers, and manufacturers as guests. Irving B. Hexter, publisher of *The Refrigeration Industry*, and George F. Taubeneck, editor and publisher of *Air Conditioning & Refrigeration News*, spoke at the luncheon meeting.

Speakers at the business sessions

included Zed Jones, San Francisco Contractor Association executive secretary, who discussed "Curbing Unfair Trade Practices;" Dolph Jansen, Jr., of Fuller & Smith & Ross, Cleveland, on "Let's Thaw Out Some Refrigerated Facts About Merchandising;" George S. Jones, Jr., Servel, Inc., who covered "Manufacturer-Contractor Relations;" George Roche, president of REWA, who covered "Wholesaler-Contractor Relations;" Arthur M. Carney, executive secretary of the Seattle Contractors Association, on "Establishing and Building Up a Local Association;" and E. S. Wright, NARC president-to-be, who spoke on "Off With the Old, Onward With the New."

More complete reports of some of the above talks, as well as additional information on significant committee

reports, will be published in later issues of *The Refrigeration Industry*.

Following are some highlights from the annual report of President Warren W. Farr, pointing up, in part, the progress achieved by NARC during the past year:

"A great deal of time and effort went into our trade relations work this year. I would like to report at this time that we have been accorded very splendid cooperation from the relations committees of both REMA and REWA.

"One of the main items in short supply this year was, again, Freon. The Freon situation has been an important activity of your national officers. The letters forwarded to our office indicate that many contractors have had their gross sales reduced and their customer relations impaired due to the lack of Freon. The National Association has spent considerable money in an effort to secure better distribution of this short material.

"Our first set of statistics on contractors were obtained, summarized, and released. Sales and service volume, kinds of business transacted, wage rates, number of employees, and overhead ratios were included. One of the most significant facts indicated was an annual buying power of 160 million dollars by members of NARC.

"Many special services have been available to members throughout the year by the national office. We have compiled and released some information on operating forms, particularly on maintenance and service contracts, in which quite a few members have expressed interest.

"A complete file of existing labor contracts and union agreements have been maintained by the national office and have been available to local associations and members. Also, the national office library contains a generous amount of information

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They Head NARC for Coming Year



Here are the new officers and directors of the National Association of Refrigeration Contractors for 1948. Back row: J. J. Helminak, executive vice president, Cleveland; H. E. Wheeler, Chicago, first vice president; James H. Lessard, Seattle, second vice president; Eldon S. Wright, Youngstown, Ohio, president; C. R. Faulkner, Longview, Tex., director; Warren W. Farr, Cleveland, immediate past president and director. Front row: Nathan Edelstein, New York City, recording secretary; F. J. Zoppel, Columbus, director; Lee Shirar, San Francisco, director; A. M. Palen, St. Paul, treasurer; L. C. Anderson, Chicago, former director; James E. Perry, Detroit, director. Not in the picture are Ralph Lampie, Richmond, Va., sergeant-at-arms, and W. L. Drake, Indianapolis, director.

"Freon" Shipments Reduced!

Shipments of "Freon" in cylinders have been cut. Greater reduction may be necessary. This is simply because Kinetic is not receiving enough empty cylinders to maintain its previous high rate of shipment.

No cylinders...no "Freon"! The situation now has reached that very critical stage.

Loaded "Freon" cylinders shipped during recent months have far exceeded empty cylinders returned.

New cylinders on order are delayed because shortages of steel continue.

Production of "Freon" is not the problem. Lack of cylinders is!

You who have loaded "Freon" cylinders in storage, why not charge systems now in anticipation of spring requirements? You'll be ahead of the game, and the emptied cylinders can be put back into circulation.

Only the return of empty "Freon" cylinders NOW will allow continued deliveries of "Freon" to meet spring and summer requirements.

Will you help? Return every empty "Freon" cylinder today. Remember...no cylinders...no "Freon"!

Kinetic Chemicals, Inc., Tenth and Market Streets, Wilmington 98, Delaware.



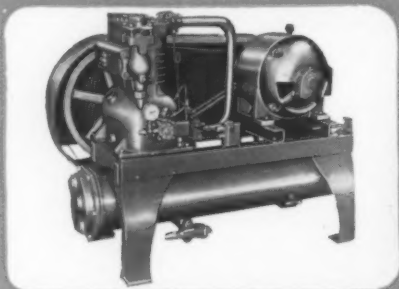
Ship empties freight collect to:

Kinetic Chemicals, Inc., Carney's Point, N. J.

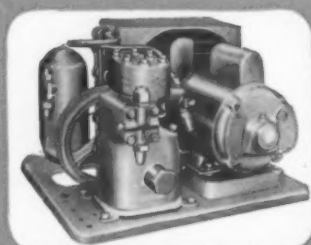
(specify PRSL as carrier)



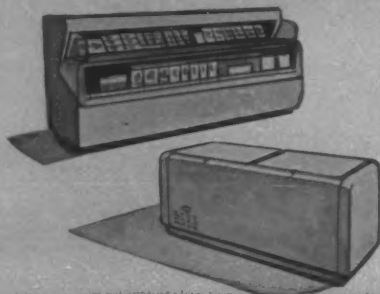
IN FROZEN FOODS DEPENDABILITY AND ECONOMICAL OPERATION REALLY COUNT!



Remotes $\frac{1}{4}$ to 15 H. P.



Self-contained $\frac{1}{8}$ to $\frac{3}{4}$ H. P.



Hermetics $\frac{1}{8}$ to $\frac{3}{4}$ H. P.

• **MORE and MORE** frozen food handlers and processors are turning to Universal Cooler Condensing Units for **REAL** dependability and **TRUE** operating economy . . .

You'll see Universal Cooler Refrigeration Condensing Units installed in many of the farm and home freezers and processing equipment displayed at the Frozen Foods show. Our engineering department will gladly furnish data showing how you, too, can benefit from our 26 years of experience and engineering know-how.

UNIVERSAL COOLER



DIVISION INTERNATIONAL DETROLA CORPORATION
MARION, OHIO • BRANTFORD, ONTARIO

ABOUT *People*

Don R. Fairchild has been appointed advertising manager of The Weatherhead Co. He will direct the company's entire advertising program, including promotion and display efforts. Mr. Fairchild comes to Weatherhead from the F. C. Russell Co., where he was sales promotion director. Prior to his association with the Russell organization he served for a number of years as advertising and sales promotion director for Jack & Heintz Precision Industries, Inc.



Mr. Fairchild

Thomas G. Carey has been advanced by Weatherhead to the position of purchasing agent of production parts and sub-contracting.

Victor Products Corp., Hagerstown, Md., has announced the appointment of **C. B. Carlson** as sales representative in the Chicago territory, effective Feb. 1. Mr. Carlson has been in the engineering field for the past 15 years and prior to this new appointment had held the position of manager of the service department at Victor Products.

Gordon M. DeJarlais has been appointed service manager of the unit air conditioner division of Fedders - Quigan Corp. In this capacity he will be responsible for developing the division's complete service and installation program, including dealer and distributor cooperation and training. A graduate engineer, Mr. DeJarlais has had extensive experience in engineering, development, research, and experimental work in the refrigeration and air conditioning field.



Irvin A. "Bus" Eubanks has been named to the newly created post of supervisor of information at Airtemp Div., Chrysler Corp. Mr. Eubanks, a former newspaperman, joined Airtemp August 12, 1946 as editor of Chrysler Airtemp News. The publishing of the dealer and employee magazines will remain under his supervision and in addition he will have charge of all informational activities of the division.



Edward M. Smith has been appointed manager of the Chicago branch office for Penn Electric Switch Co. to succeed W. W. Lige, who has resigned. Mr. Smith has been a sales engineer with the Penn organization for the past 10 years. During the last 2½ years, he was manager of the company's Goshen, Ind. territory.



Tom Campbell has been appointed district manager for United Refrigerator Co., covering the states of Texas, Oklahoma, Louisiana, Mississippi, Arkansas, and Tennessee. Formerly president of Southern Electric Co. of New Orleans, his present headquarters are in Memphis, Tenn. His long experience in the refrigeration field includes periods of service with Kelvinator, Russ Soda Fountain and General Electric.



Philip S. Morris has been appointed vice president in charge of advertising, purchasing, and credit for McQuay, Inc., and **H. Blake Thomas** has been named the firm's general sales manager. Mr. Morris



Mr. Morris



Mr. Thomas

joined the company a year ago as assistant to the president. Mr. Thomas, formerly assistant sales manager, succeeds R. C. Colman, who is retiring from active participation after 15 years with McQuay. Mr. Thomas returned to this country in the fall of 1946 from England, where he served during the war as general sales manager of Chromomatic Corp., manufacturer of time control equipment.

Robert Heller, nationally-known industrial engineer and head of Robert Heller & Associates, has been elected a director and member of the executive committee of Jack & Heintz Precision Industries, Inc.

Robert B. Holland has been named representative in California, Nevada, and Arizona for Kramer Trenton Co. Mr. Holland has been connected with the direct factory representation of York Corp. for 23 years. He will maintain an office in San Francisco, at 461 Market St., and another in Los Angeles at 5225 Wilshire Blvd. **Phil Kilgore** will be in charge of the Los Angeles office.



Mr. Holland

A. B. Bechaud, sales manager of Ben-Hur Mfg. Co., has been elected to the position of vice president of the company. Bechaud organized the firm's freezer department in 1943.

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CHECK YOUR COSTS

or they'll check you

WATCH your costs, but don't cut down your sales efforts! That is my advice to the nation's appliance-refrigerator dealers.

The era of easy selling and high volume of income in the hands of the public experienced during 1946 and the first six months of 1947 may never come again, but the alert retailer can prepare himself for the future by keeping accurate records and by

carefully watching his costs. This fact is brought out by the Cost-of-Doing-Business Study recently completed by the National Electrical Retailers Association.

Association members were asked to submit confidential reports of their expenses for 1946 and the first six months of 1947, and three sets of average cost figures were developed from these reports:

National average cost figures—to enable individual dealers to compare their own costs with the national average of all dealers.

Average costs by regions—so each dealer could compare his costs with the average in his geographical area.

Average by various sized dealers—for the dealer to relate his costs to those of dealers in his same volume bracket.

The data accumulated in the study

Everyone agrees that in the days to get. When those days arrive, will be the one whose costs are in on a national survey, to help you

By D. S. Watson

Department of Economics
George Washington University
Washington, D. C.

are significant. While it is readily admitted that the present seller's market will be of short duration, the figures reveal that the higher volume during the first six months of 1947 not only kept most dealers' costs down but also permitted a slight increase in net profits over the whole year 1946.

Further indication that conditions were unusual during the 18 months under study is the fact that few dealers reported net losses, contrary to the situation which invariably exists in a normal business year.

Tables 1, 2 and 3 show national average cost figures for the year 1946 and the first six months of 1947, with corresponding percentage change.

Business was much better in the first half of 1947 than it was in 1946, as shown by dealers' reports tabulated in Table 4.

TABLE 1: NATIONAL AVERAGE 1946

(All figures are in per cent of sales)

| | | |
|-------------------------------------|--------------|------|
| Gross Profit: | 33.9% | |
| Net Profit: | 8.5% | |
| Operating Costs: | 25.4% | |
| Occupancy expense | 4.8 | 3.7% |
| Cost of salesmen | 2.8 | |
| Other sales costs | | |
| Sales costs: total | | 7.6 |
| Newspaper advertising & direct mail | 1.5 | |
| Other advertising | 0.4 | |
| Total advertising costs | | 1.9 |
| Administrative expense | 7.1 | |
| Servicing | 3.3 | |
| Other costs | 1.8 | |
| Total | 25.4% | |

TABLE 2: NATIONAL AVERAGE—FIRST 6 MONTHS 1947

(All figures are in per cent of sales)

| | | |
|-------------------------------------|--------------|------|
| Gross Profit: | 33.5% | |
| Net Profit: | 9.0% | |
| Operating Costs: | 24.5% | |
| Occupancy expense | 5.8 | 3.5% |
| Cost of salesmen | 1.6 | |
| Other sales costs | | |
| Sales costs: total | | 7.4 |
| Newspaper advertising & direct mail | 1.8 | |
| Other advertising | 0.5 | |
| Total advertising costs | | 2.3 |
| Administrative expense | 6.5 | |
| Servicing | 2.5 | |
| Other costs | 2.3 | |
| Total | 24.5% | |

TABLE 3: PERCENTAGE CHANGE FROM 1946 TO FIRST HALF OF 1947

| | Increase | Decrease |
|-------------------------|----------|----------|
| Gross Profit: | | 1.2% |
| Net Profit: | 5.8% | |
| Operating Costs: | | 3.5 |
| Occupancy expense | | 5.4 |
| Sales costs: total | | 2.6 |
| Total advertising costs | 21.5 | |
| Administrative expense | | 8.4 |
| Servicing | | 24.4 |
| Other costs | 27.8 | |

TABLE 4: SALES IN FIRST 6 MONTHS OF 1947 AS COMPARED WITH 1946

| Sales in 1st 6 mo. of 1947 in Per Cent of 1946 Sales | Per cent of reporting dealers in each group |
|--|---|
| 25—49% | 10% |
| 50—74 | 46 |
| 75—99 | 34 |
| 100—124 | 6 |
| 125—149 | 4 |
| Average: 75.3% | |

TABLE 5: APPLIANCES SOLD IN RELATION TO TOTAL SALES

| | Per cent of Total Sales 1946 | 1947 (1st 6 mo.) |
|-----------------------|------------------------------|------------------|
| Washing machine sales | 16.1% | 18.3% |
| Refrigerator sales | 19.4 | 20.3 |
| Vacuum cleaner sales | 3.2 | 2.1 |
| Radio sales | 17.2 | 18.9 |
| Range sales | 12.1 | 12.2 |
| Other sales | 32.0 | 28.2 |

TABLE 6: PER CENT OF TOTAL SALES OF EACH ITEM INVOLVING A TRADE-IN

| Appliance | 1946 | 1947 (1st 6 mo.) |
|-----------------|------|------------------|
| Refrigerators | 3% | 6% |
| Washers | 4 | 9 |
| Vacuum Cleaners | 10 | 12 |
| Ranges | 2 | 4 |

ur profits

Some sales will be harder
dealer who suffers least
Here are figures, based
your "house" in order

Nine out of ten dealers had sales in the first half of 1947 which were more than half their volume for the entire year 1946. Some of the dealers—actually the figure was 10%—showed more sales in the first half of 1947 than they had in the entire year 1946.

On the average, the January through June sales in 1947 were three-quarters of the sales for the whole year 1946. This means that for every \$100 worth of merchandise sold for the entire year 1946, the average dealer in only six months of 1947 sold \$75.30 worth of merchandise.

Make Your Own Comparison

More refrigerators were sold during 1946 and 1947 than any other major appliance, Table 5 reveals. In 1946 refrigerator sales accounted for 19.4% of the total dealer sales, the survey reveals. In the first six months of 1947, this figure rose to 20.3% of total sales.

While trade-ins were a negligible factor in 1946 sales, dealers reported a slight increase in trade-ins during the first six months of 1947, as is shown in Table 6. Some dealers reported no trade-ins at all. However, the number of trade-ins undoubtedly will show a steady increase in the future, particularly in the field of refrigerator and automatic washer sales.

Valuable lessons are to be learned from the study. To do so, each individual dealer should compare his operations with the average for his region and the size volume of his store, as well as comparing his costs with the national average.

TABLE 7: ANALYSIS OF AVERAGE GROSS PROFIT, AVERAGE TOTAL COSTS AND AVERAGE NET PROFITS BY REGIONS

| | | National Average | I | Regional II | Averages III | IV |
|--------------|------|------------------|-------|-------------|--------------|-------|
| Gross Profit | 1946 | 33.9% | 32.5% | 33.2% | 34.9% | 35.7% |
| | 1947 | 33.5 | 32.7 | 33.0 | 31.8 | 36.3 |
| Total Costs | 1946 | 25.4 | 23.9 | 22.4 | 26.3 | 26.3 |
| | 1947 | 24.5 | 25.4 | 22.7 | 29.9 | 23.7 |
| Net Profit | 1946 | 8.5 | 8.4 | 10.8 | 8.6 | 9.4 |
| | 1947 | 9.0 | 7.3 | 10.3 | 4.9 | 12.6 |

Region I: New England, Middle & South Atlantic States (including Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Dist. of Columbia, Delaware, Maryland, Virginia, West Va., No. Carolina, So. Carolina, Georgia, Florida.)

II: East & West North Central States (including Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, No. Dakota, So. Dakota, Nebraska, Kansas.)

III: East & West South Central States (including Kentucky, Tennessee, Ala., Mississippi, Arkansas, Louisiana, Oklahoma, Texas.)

IV: Mountain & Pacific States (including Montana, Idaho, Wyoming, Colo., New Mexico, Arizona, Utah, Nevada, Washington, California, Oregon.)

TABLE 8: GROSS PROFITS, PROFITS AND COSTS OF DEALERS OF DIFFERENT SIZES (ALL FIGURES ARE PERCENTAGES OF SALES)

| | | All Dealers | DEALERS WITH 1946 SALES OF Less than \$75,000 | \$75,000 to \$150,000 | \$150,000 to \$250,000 | Over \$250,000 |
|-------------------------|------|-------------|---|-----------------------|------------------------|----------------|
| Gross Profit | 1946 | 33.9 | 33.8 | 34.0 | 35.1 | 32.1 |
| | 1947 | 33.5 | 33.7 | 33.0 | 36.5 | 30.6 |
| Net Profit | 1946 | 8.5 | 10.2 | 9.5 | 5.2 | 5.6 |
| | 1947 | 9.0 | 10.4 | 11.4 | 9.9 | 4.3 |
| Operating Costs | 1946 | 25.4 | 23.0 | 24.5 | 29.9 | 26.5 |
| | 1947 | 24.5 | 23.3 | 21.6 | 26.6 | 26.3 |
| Occupancy Expense | 1946 | 3.7 | 4.1 | 2.7 | 3.6 | 3.9 |
| | 1947 | 3.5 | 4.0 | 2.4 | 3.3 | 5.8 |
| Sales Costs: Total | 1946 | 7.6 | 6.5 | 6.9 | 7.8 | 7.7 |
| | 1947 | 7.4 | 6.8 | 6.4 | 7.8 | 7.8 |
| Advertising Costs | 1946 | 1.9 | 2.3 | 1.5 | 1.7 | 2.1 |
| | 1947 | 2.3 | 2.7 | 2.1 | 2.0 | 2.3 |
| Administrative Expenses | 1946 | 7.1 | 8.3 | 6.5 | 6.8 | 7.4 |
| | 1947 | 6.5 | 7.9 | 5.9 | 5.8 | 7.0 |
| Servicing | 1946 | 3.3 | 1.8 | 3.7 | 5.0 | 2.4 |
| | 1947 | 2.5 | 1.8 | 2.4 | 3.4 | 2.2 |

TABLE 9: COMPARISON OF COSTS OF DEALERS OF DIFFERENT SIZES

| | | All Dealers | DEALERS WITH 1946 SALES OF Less than \$75,000 | \$75,000 to \$150,000 | \$150,000 to \$250,000 | Over \$250,000 |
|--------------------------|------|-------------|---|-----------------------|------------------------|----------------|
| Operating Costs | 1946 | 100 | 100 | 100 | 100 | 100 |
| | 1947 | 100 | 100 | 100 | 100 | 100 |
| Occupancy Expense | 1946 | 14.8 | 17.3 | 10.8 | 12.0 | 14.8 |
| | 1947 | 14.0 | 17.0 | 10.6 | 12.4 | 22.0 |
| Sales Costs: Total | 1946 | 30.4 | 28.3 | 27.6 | 25.7 | 28.3 |
| | 1947 | 29.2 | 29.1 | 29.6 | 29.3 | 29.8 |
| Advertising Costs: Total | 1946 | 7.6 | 10.0 | 6.1 | 5.6 | 8.0 |
| | 1947 | 9.2 | 11.6 | 10.0 | 7.5 | 8.7 |
| Administrative Expense | 1946 | 28.4 | 36.1 | 26.1 | 22.6 | 28.0 |
| | 1947 | 26.0 | 33.9 | 27.3 | 21.8 | 26.6 |
| Servicing | 1946 | 13.2 | 7.1 | 14.9 | 16.5 | 9.1 |
| | 1947 | 10.0 | 6.9 | 10.6 | 12.8 | 7.6 |

For sake of brevity, when reference is made to 1947, the first six months of the year are meant.

Gross profit as used in this survey is the difference between the cost of goods and net sales.

Nearly all dealer profit margins ranged between 30 and 40%. As a matter of fact, a large number of dealers had margins very close to the

average margins for the entire group.

Gross profit was less in 1947, however, than in 1946. For 1946 the figure was 33.9% of sales and for 1947, 33.5% of sales, or a gross profit decline of 1.2%.

While some costs went up during the period under study, other costs went down. Important conclusions can be drawn by careful study of the

TABLE 10: COMPARISON OF HIGH AND LOW PROFIT DEALERS WITH THE AVERAGE DEALER IN 1946 (PER CENT OF SALES)

| | Net Profit | Gross Margin | Occupancy Expense | Total Selling Costs | Total Publicity Cost | Administrative Expense | Servicing | Total Cost |
|----------------|------------|--------------|-------------------|---------------------|----------------------|------------------------|-----------|------------|
| Average Dealer | 8.5 | 33.9 | 3.7 | 7.6 | 1.9 | 7.1 | 3.3 | 25.4 |
| High-Profit " | 16.3 | 39.6 | 3.2 | 6.1 | 2.3 | 6.5 | 4.6 | 23.3 |
| Low-Profit " | 2.2 | 30.6 | 4.1 | 5.3 | 3.7 | 8.7 | 2.6 | 28.4 |

High Profits = average of 15% or more of sales in 1946 and 1st 6 mos. of 1947
 Low Profits = average of 5% or less of sales in 1946 and 1st 6 mos. of 1947

High and Low-Profit Dealers in Per Cent of Average Dealer

| | | | | | | | |
|-------------|-------|-------|------|-------|-------|-------|-------|
| High-Profit | 119.0 | 86.5 | 80.3 | 121.1 | 91.5 | 139.4 | 91.3 |
| Low-Profit | 91.9 | 110.8 | 70.0 | 194.7 | 122.5 | 78.8 | 111.8 |

TABLE 11 COMPARISON OF HIGH AND LOW PROFIT DEALERS WITH THE AVERAGE DEALERS IN 1947 (PER CENT OF SALES)

| | | | | | | | Other Total Costs | Total Cost |
|----------------|------|------|-----|-----|-----|-----|-------------------|------------|
| Average Dealer | 9.0 | 33.5 | 3.5 | 7.4 | 2.3 | 6.5 | 2.5 | 24.5 |
| High-Profit " | 20.7 | 40.4 | 2.4 | 5.9 | 3.3 | 4.8 | 4.6 | 19.7 |
| Low-Profit " | 0.6 | 30.9 | 4.9 | 6.5 | 4.9 | 7.9 | 3.5 | 30.3 |

High and Low-Profit Dealers in Per Cent of Average Dealer

| | | | | | | | |
|-------------|-------|-------|------|-------|-------|-------|-------|
| High-Profit | 120.6 | 68.6 | 79.9 | 146.5 | 73.8 | 184.0 | 80.4 |
| Low-Profit | 92.0 | 140.0 | 87.8 | 213.0 | 121.8 | 140.0 | 123.7 |

following cost summary.

Occupancy Expense: For purposes of this analysis, occupancy expense is designated to include the amount spent for rent, light, heat, power, water, janitor, etc. In short, all expenses incurred in occupying the dealer's premises, whether store or warehouse.

Occupancy expense during 1946 accounted for \$3.70 for every \$100 worth of merchandise sold. In 1947, however, the dealer spent an average of only \$3.50 on occupancy expense for each \$100 in sales. The decline of 20 cents for each \$100 worth of merchandise sold can be directly attributed to the relatively greater volume of business in 1947 over 1946.

Considerable variation in this item of occupancy expense was noted from one dealer to another. Some dealers had occupancy expenses that were far out of line with the average.

Cost of Salesmen

Cost of Salesmen: This cost includes all monies paid to men or women for selling appliances—whether salary, commission, drawing account, bonus or other incentives—as well as cost of sales supervision and expense accounts.

The general average for 1946 was \$4.80 for every \$100 of sales, and for the first six months of 1947, it was \$5.80. This means that the average dealer spent $\frac{1}{6}$ more of his sales dollar on salesmen during the first six months of 1947 than he did during 1946.

Obviously this cost will show an additional increase when the period of easy selling is ended. As the seller's market becomes a thing of the past and competition becomes keener, the dealer will have to pay commission on many items which now more-or-less sell themselves.

Other Sales Costs: Miscellaneous expenses in connection with selling expense—such as cost of sales supplies, delivery expenses and delivery equipment upkeep—averaged \$2.80 of each \$100 of sales in 1946 and only \$1.60 in 1947. Again the decline may be chalked up to higher volume.

Total Sales Costs

Total Sales Costs: Included in total sales costs are costs of salesmen and other sales costs. This item showed a decline from \$7.60 per \$100 of sales in 1946 to \$7.40 in 1947. Although this decline is very slight, the figures clearly show that dealers were putting more effort into their selling, when the larger volume of business in 1947 is taken into consideration.

At the same time the remarkable fact is that all dealers, whether very large or very small, spent about the same proportion of total operating costs on selling.

Newspaper Advertising & Direct Mail: Changing market conditions and an increased importance on promotions is clearly indicated by the fact that there was a 20% increase in the expenditure for newspaper advertising and direct mail in 1947 com-

pared to 1946.

The aggregate amount spent, however, was a small item—only \$1.50 of each \$100 of sales in 1946 and \$1.80 in 1947.

Nearly all dealers reported some outlay under this heading. Some dealers spent as high as 5% of sales, while others only showed newspaper advertising and direct mail expense as low as $\frac{1}{2}$ of 1%.

Other Advertising: This includes the cost of bill boards, window trimming, radio advertising and advertising agency assistance. Most dealers reported no expenses at all under this heading. The overall average, therefore, is only 40 cents per \$100 of sales for 1946 and 50 cents for the first six months of 1947.

The increase is noteworthy, however, because it is relatively so large. It would seem to reflect that with the availability of more merchandise and the anticipation of the end of the seller's market boom, those dealers who do go in for this type of advertising have decided to spend more money on this expenditure.

Total Advertising Cost

Total Advertising Cost: The total cost of all advertising jumped to 2.3% in 1947, from an average of 1.9% of sales in 1946.

Variation among dealers was great, some reporting expenses of this type as much as 15% of sales, and others less than 1%.

Administrative Expense: This expense is what the dealer paid himself or someone else as manager of his business, also salaries of his office staff, collection expenses and the expenses incurred for office supplies, etc. Like occupancy expenses, this is an "overhead" item, and a relatively large one for most dealers.

For 1946 administrative expenses averaged \$7.10 per \$100 of sales, and in 1947 came to \$6.50. This decline was to be expected in the light of the relative increase in sales volume in 1947. In any event, the fact that sales went up in 1947 was a big factor behind this decline.

Servicing: This covers the total amount of money paid for the maintenance of the dealer's service department, including the salaries and expenses of service men.

Since many dealers do not maintain service departments, they reported no expense for this item. General aver-

Continued on page 54

REFRIGERATION INDUSTRY

News

GIBSON BUYS OUT COOLERATOR CO.

The Gibson Refrigerator Co., Greenville, Mich., has purchased the Coolerator Co., of Duluth, Minn., it was announced recently. More than \$2 million was reportedly involved in the transaction. Distribution of the Coolerator line through present channels will not be affected, it was said, and John H. Ganzer, with Coolerator since 1921, will continue as president of the Duluth firm.

C. J. Gibson, president of Gibson Refrigerator, also said that no changes in personnel will be made in the Duluth staff. The combined plants of the organization will produce more than 2,000 units per day, it was said. Combined sales of the two concerns in 1947 was estimated at \$34 million, of which Coolerator accounted for \$12 million.

G-E FORMS NEW WATER COOLER DIV.

General Electric has established a water cooler division and has appointed C. E. Horner as division manager. Headquarters for the division will be at the company's new water cooler plant at Bowling Green, Ky.

Full responsibility for engineering, manufacturing, accounting, and sales of the water cooler product line, which was formerly handled by the commercial refrigeration distributor division, will be undertaken by the new division.

Until further notice, the G-E plant at Ft. Wayne, Ind., will continue to manufacture water coolers. H. M. Landemare will continue in charge of sales until a sales manager is appointed.

Prior to his new job, Horner, who began his G-E career in 1935, was handling special assignments for the company's air conditioning department.

WEBER REORGANIZES SALES SETUP



H. M. Brundage, vice president in charge of sales of Weber Showcase & Fixture Co., discusses the firm's revised sales setup with three key executives. Facing Brundage are (left to right): Jerry L. Kaufhold, national sales manager, standard products division; Don Hilke, director of sales promotion and advertising; and W. M. Borton, market and product research manager.

Decentralization of its national sales organization, involving the establishment of four regional sales offices, two executive promotions, and the creation of a new key position in the headquarters staff, has been effected by Weber Showcase & Fixture Co.

Under the new arrangement each regional office—western, midwestern, eastern, and southern—will be a complete unit, handling all of the company's business in that region, thereby alleviating the necessity of contact with the main factory at Los Angeles. Complete warehouse stock will be carried in each of the four regions.

In the shifts of executive personnel, D. D. Hilke, former manager of national sales representatives' activities, has been named director of sales promotion and advertising; J. L. Kaufhold, who since the war has served as head of Weber's retail sales division in Los Angeles, has been appointed national sales manager of the standard products; and W. M. Borton, a sales management and marketing specialist who is a newcomer to the Weber organization, was named to the newly created post of market and product research manager.

Entire purpose of the re-

vamped setup, according to H. M. Brundage, newly appointed vice president in charge of sales, is to make each of the regional headquarters in effect a "home office", in order to provide better sales coordination and prompter product delivery to Weber customers throughout the country.

Chicago has been selected as headquarters city for the midwest region, and A. W. Serpa, district manager in Omaha, Neb. since 1945, has been named sales manager of that region. Headquarters cities for the other three regions will be announced soon.

Coincidental with this sales staff reorganization, Weber has sent 1948 price lists to its dealers showing substantial reductions on most items in the line.

WAGNER OFFICIAL GETS NEMA AWARD

A. H. Timmerman, vice president of Wagner Electric Corp., has received from the National Electrical Manufacturers Association a certificate commending him for "50 years of continuous service in the electrical industry."

Mr. Timmerman joined the Wagner organization in 1899, and has been active in electrical and engineering associations ever since.

CYLINDER SHORTAGE AGAIN THREATENS 'FREON' SUPPLY

Warning that a scarcity of "Freon-12" refrigerant is ahead unless users stop hoarding shipping cylinders or sending them out of the country has been issued by Kinetic Chemicals, Inc.

The situation is critical for the vital deliveries extending through the spring and summer months, the company states. Return of empties has dropped so low in the last three months that, unless there is an immediate change, production of the refrigerant and its distribution in cylinders will have to be cut.

Kinetic officials say that for eight months they have been shipping loaded cylinders far in excess of the number of empty ones returned. They have placed large orders for new cylinders, but due to the steel shortage deliveries of the new cylinders is too slow to solve the problem.

In an effort to correct this situation, Kinetic officials stress the fact that ICC-specification cylinders should be used for shipping only, not for storage.

J. S. FORBES, HEAD OF SUPERIOR VALVE, DIES SUDDENLY

John Samuel Forbes, founder and president of Superior Valve & Fittings Co., died suddenly on February 16 at the age of 53. Death came as the result of a recurrence of a heart attack. He is survived by his wife, five children, and five grandchildren.

Forbes, a director and past president of the Refrigeration Equipment Manufacturers Association, had been active in industry affairs ever since he joined Kerotest Mfg. Co. in 1919. He was treasurer and sales manager of Kerotest when he left that organization in April, 1938, to found the Superior firm.

Air Conditioning Equipment and Components and Accessories for Air Conditioning and Commercial Refrigeration Equipment: Summary of Shipments by Major Class of Product, Third Quarter 1947

| Product | Third Quarter 1947—Shipments of Complete Units | | | | | |
|---|--|-----------------|-----------------------|-----------------|---------------------|-----------------|
| | Total | | Domestic ¹ | | Export ² | |
| | Number | Value (dollars) | Number | Value (dollars) | Number | Value (dollars) |
| Section I—Components and Accessories | | | | | | |
| TOTAL | | 43,944,234 | | 39,666,945 | | 4,277,289 |
| Condensing units | 293,238 | 20,994,951 | 275,229 | 19,033,272 | 18,009 | 1,961,679 |
| Ammonia refrigerants | 419 | 560,316 | 370 | 510,477 | 49 | 49,839 |
| Refrigerants except ammonia | 292,819 | 20,434,635 | 274,859 | 18,522,795 | 17,960 | 1,911,840 |
| Air cooled | 283,972 | 16,808,899 | 266,572 | 15,210,838 | 17,400 | 1,598,061 |
| Open type | 117,940 | 10,456,526 | 102,391 | 8,944,141 | 15,549 | 1,512,385 |
| Hermetic type | 166,032 | 6,352,373 | 164,181 | 6,266,697 | 1,851 | 85,676 |
| Water cooled | 8,847 | 3,625,736 | 8,287 | 3,311,957 | 560 | 313,779 |
| Compressors and compressor units | 159,242 | 8,916,871 | 151,001 | 7,946,163 | 8,241 | 970,208 |
| Ammonia refrigerants | 970 | 2,260,309 | 762 | 1,803,208 | 208 | 457,101 |
| Refrigerants except ammonia | 158,272 | 6,656,062 | 150,239 | 6,142,955 | 8,033 | 513,107 |
| Centrifugal refrigeration machines ... | 84 | 2,086,789 | 69 | 1,631,291 | 21 | 455,498 |
| Heat exchanger equipment | | 11,946,123 | | 11,056,219 | | 889,904 |
| Evaporative condensers | 1,556 | 1,924,579 | 1,407 | 1,768,526 | 149 | 156,053 |
| Unit coolers | 33,227 | 4,797,278 | 29,864 | 4,356,959 | 3,363 | 440,319 |
| Air conditioning | 4,032 | 1,492,847 | 3,476 | 1,354,631 | 556 | 138,216 |
| Refrigeration | 29,195 | 3,304,431 | 26,388 | 3,002,328 | 2,807 | 302,103 |
| Other heat exchanger equipment ³ | | 5,224,266 | | 4,930,734 | | 293,532 |
| Section II—Self Contained Air Conditioning Units and Ice Making Machines | | | | | | |
| Self-contained air conditioning units... | 15,854 | 9,094,060 | 14,670 | 8,454,121 | 1,184 | 639,939 |
| Room type | 7,927 | 1,818,474 | 7,021 | 1,463,112 | 906 | 335,362 |
| Other than room type | 7,927 | 7,275,586 | 7,649 | 6,971,009 | 278 | 304,577 |
| Ice making machines | 1,866 | 627,761 | 1,722 | 489,899 | 144 | 137,862 |

¹ Continental United States.

² Includes Canada, Mexico, and United States territories.

³ Includes condensers and liquid coolers, shell and tube and shell and coil types, as well as fin coils (heating and cooling) and plate type evaporators.

COOLING SHIPMENTS FALL OFF SLIGHTLY IN THIRD QUARTER

Shipments of complete air conditioning equipment and components and accessories for air conditioning and commercial refrigeration equipment were valued at \$43.9 million during the third quarter of 1947, according to the Bureau of the Census, Department of Commerce.

For the first three quarters of 1947, value of commercial refrigeration and air conditioning shipments, as compiled by the Census Bureau, totaled \$139.2 million.

Shipments in the third quarter, however, represent a decrease of 11 per cent from the postwar quarterly peak of \$49.5 million shipped during the second quarter of the year.

In most major classes of components and accessories and complete air conditioning equipment, shipments

decreased from the preceding quarter. Principal decreases were as follows:

Heat exchanger equipment, 16 percent, from \$14.1 million in the second quarter to \$11.9 million in the third quarter; self-contained air conditioning units, 14 percent, from \$10.6 million to \$9.1 million; compressors and compressor units, 12 percent, from \$10.1 million to \$8.9 million; and condensing units, 11 percent, from \$23.7 million to \$21.0 million.

Two major classes showed increases for the period: centrifugal refrigeration machines, 34 percent, from \$1.6 million to \$2.1 million; and ice making machines, 21 percent, from \$0.5 million to \$0.6 million. The data are based on the activity of 71 manufacturers. Tabulated summary for the third quarter is shown in the accompanying table.

BAKER DEALERS TO SELL MARLO LINE

The Baker Ice Machine Co., Inc. has announced the completion of an agreement with Marlo Coil Co., under which the Marlo line of heat transfer equipment will be available through all Baker offices and distributors.

Principal Marlo products to be handled by Baker in conjunction with its own line of Freon-12 and ammonia compressors and equipment include: Marlo evaporative condensers and coolers, air-conditioning units, industrial blower units, cooling towers and other Marlo air-conditioning and refrigeration apparatus.

Purpose of this arrangement is to enable the Baker organization to enlarge its services in all types of air-conditioning and refrigeration installations, the company said.

REMA, RSES PLAN MEETINGS SERIES

The Refrigeration Equipment Manufacturers Association voted, at a recent meeting of its board of directors, to cooperate with the Refrigeration Service Engineers Society in staging a new series of three or four regional educational conferences for servicemen every other year.

The conferences will be held in widely separated parts of the United States beginning this year and continuing in the off years between All-Industry Refrigeration and Air Conditioning Expositions which REMA will continue to sponsor every other year.

Under the arrangements, RSES will direct that part of the conference consisting of formal educational meetings at which servicemen will hear talks on various general subjects pertaining to refrigeration problems.

REMA has agreed to underwrite the conferences and will arrange for the booths at which manufacturers will present educational exhibits. The REMA board of directors emphasized that booths would be limited in number and size, and that exhibits will be confined to cut-away models, working models, and similar displays of an educational nature. Striving to remove the conferences from commercialism, the board stated that no commercial displays or exhibits will be permitted.

Details of individual regional educational conferences will be worked out by a joint REMA-RSES committee.

PACIFIC MFG. CORP. PLANS DISSOLUTION

Pacific Mfg. Corp., producer of packaged air conditioners, has filed a petition in bankruptcy in Federal Court in Cleveland in which it asked that it be allowed to proceed under a plan of voluntary settlement with creditors.

The firm listed debts totaling \$283,755 and assets of \$251,337. It pointed out, however, that it felt as a "going" concern its actual assets were \$100,000 more than listed.

Hugh C. Troth is president of the company.

PENN SWITCH OPENS NEW SALES OFFICE

A new sales office supervised by J. E. Corbett has been opened by Penn Electric Switch Co. at 2126 Monroe Av., Rochester, N. Y.

The Rochester office is a division of the company's New York branch which is managed by N. E. Jennison. This move was made to give more efficient service to Penn's customers in upper New York state. Corbett formerly covered this territory from the company's New York office.

COLEMAN HEADS N.Y. JOBBER GROUP

Phil Coleman of Coleman Electric Supply Co. has been elected chairman of the Metropolitan Refrigeration Air Conditioning Jobbers Association of New York, Inc. to succeed Benjamin V. Blazer, whose term expired. Ted Yecies of Tesco Co. was elected secretary of the organization, replacing Irving J. Fajans.

Report of the Farm and Home Freezer Manufacturers Association on the Total Number of Freezers Shipped by Member Companies During 1947

| | 4 to 6.9 | 7 to 10.9 | 11 to 15.9 | 16 to 20.9 | 21 to 29.9 | 30 to 6 Over |
|------------------------------------|----------------|-----------------|------------------|------------------|------------------|-----------------------|
| January | 3,116 | 920 | 4,515 | 2,786 | 570 | 226 |
| February | 1,660 | 920 | 4,845 | 2,569 | 325 | 249 |
| March | 2,363 | 780 | 8,813 | 2,436 | 533 | 164 |
| April | 5,256 | 466 | 6,222 | 3,016 | 697 | 112 |
| May | 1,573 | 625 | 3,113 | 2,917 | 121 | 72 |
| June | 3,240 | 1,175 | 4,058 | 4,766 | 210 | 48 |
| July | 2,810 | 1,348 | 3,415 | 561 | 280 | 70 |
| August | 4,276 | 3,545 | 4,575 | 1,102 | 249 | 50 |
| September | 3,486 | 2,534 | 5,409 | 870 | 253 | 61 |
| October | 978 | 2,146 | 3,267 | 2,535 | 237 | 38 |
| November | 1,859 | 1,286 | 3,530 | 3,993 | 252 | 58 |
| December | 1,640 | 1,076 | 3,994 | 3,853 | 369 | 77 |
| Total | 32,257 | 16,821 | 55,756 | 31,404 | 4,096 | 1,225 |
| Stock-on-hand January Jan. 1, 1947 | | | | | | 1,610 |
| Total Production | | | | | | 147,078 |
| Shipments | | | | | | 141,559 |
| Stock-on-hand December 31, 1947 | | | | | | 7,129 |
| Dollar Value | | | | | | \$33,996,782.39 |
| Average Unit Selling Price | | | | | | 240.16 |

FRIGIDAIRE AIMS TO DOUBLE COMMERCIAL SALES VOLUME

Current national expansion plans call for Frigidaire Div. of General Motors to "double" its sales volume of commercial refrigeration and air conditioning equipment in 1948, according to disclosures made by W. F. Switzer, commercial sales manager, during a series of five regional commercial meetings conducted for key personnel from coast to coast.

At the same time Switzer warned district representatives that the commercial phase of the business is already face-to-face with a normal buyers' market. "We must greatly strengthen our retail organization," he urged, "we must forge hard-hitting, down-to-earth sales and service plans to cope successfully with competitive days ahead."

Tracing the rapid growth of Frigidaire's commercial business, he pointed out that the 1947 sales volume amounted to twice that of 1946 and nearly three times as much as 1940.

IT HAPPENED AT THE SHOW



E. A. Bonneville (right), sales manager of Fedders-Quigan Corp., smiles happily—and who wouldn't?—as he receives from D. W. May of the D. W. May Co., New York City, an order for 30 carloads of Fedders unit air conditioners. Witnessing the transaction are Salvatore Giordano (front), Fedders-Quigan president, and E. M. Becker, regional manager. This is believed to be the largest single order ever placed for 1/2 and 3/4-hp window type air conditioners.

FROZEN FOOD SHOW SLATED FOR CHICAGO MARCH 15 TO 18

Nineteen major problems, twelve of a general nature and seven on technical aspects, will be considered at the second national Frozen Food Industry Exposition and convention to be held at the Hotel Stevens, Chicago, March 15 to 18, inclusive.

The exposition is under the sponsorship of the National Association of Frozen Food Packers. Representative companies manufacturing equipment, machinery, supplies, materials and services will exhibit.

Concurrently with the packers' convention, there will be meetings of distributors and brokers at the Congress and Morrison hotels. Annual meetings of both the National Association of Food Packers and the National Wholesale Frozen Food Distributors, Inc., will be held Tuesday, March 16. Also represented at the meetings will be the National Food Brokers Association. The Quick Frozen Foods Association of Chicago is cooperating in the handling of convention arrangements.

Conference subjects include "How the Banker Views the Frozen Foods Industry," by Herbert Prochnow, executive vice-president, First National Bank of Chicago; "Importance of Research to Development of

the Industry," Dr. Franklin Snyder, president, Northwestern University; "Impact of Food and Drug Administration Standards on the Frozen Food Industry," Arthur Herrick, authority on F.D.A. standards for food products; "Public Relations as a Factor in Industry Development," John Moninger, American Meat Institute; "Warehousing Problems," E. M. Burns, vice-president, National Association of Refrigerated Warehouses, and secretary, Northwest Frozen Foods Assn.

VICTOR GASKET OPENS NEW STOCK CENTER

All merchandise shipments to the trade by Victor Mfg. and Gasket Co. now are being made from the recently opened stock and merchandising center at 3636 Iron Street in Chicago.

Operations at the new five-story unit, designated as Victor Plant No. 5, are under the wing of Wm. F. Victor, vice president of the company.

The move completes Victor's plans for greater efficiency in stock servicing by centralizing all inventory, and to expedite order filling and packing with minimum error by standardizing all such procedures.

Wm. F. Victor is the younger son of the company's president and founder, John H. Victor.

CHECK YOUR COSTS . . .

Continued from page 50

age for 1946 was \$3.20 of each \$100 of sales and \$2.50 of each \$100 of sales in 1947.

Total Operating Costs: As the direct result of higher volume, the dealer's total operating costs declined 3.5% from 1946 to 1947. In 1946, total operating costs were 25.4% of sales, and in 1947, 24.5%.

One of the largest increases in operating costs was the cost of salesmen, which was up 20% in 1947 over 1946. Dealers who look to the future must realize that the cost of salesmen will increase progressively as competition increases.

In addition to cost of salesmen, advertising and "other" costs also increased, although all remaining costs fell.

Net Profits

Net profits were up 5.8% in 1947 compared with 1946. They increased from 8.5% of sales to 9.0% of sales. In other words, of every \$100 sold in 1946, the average dealer made net profits of \$8.50, and in the next six months made \$9.00, or an increase of 50 cents per \$100 of sales.

These profits may be compared with the profits given in the O.P.A. study which shows for the year 1941 the average profit of appliance-radio dealers was 6.9% of sales. In many respects 1941 may be regarded as a normally good year. The 1946-47 profits of NERA dealers were, it is true, higher but not abnormally high. In all probability rising costs of selling and advertising in the near future will reduce the present levels of net profit.

In general, profits increased because costs in relation to sales fell more than gross profits from 1946 to 1947.

Regional Variations

No outstanding regional variations were brought out by the NERA survey. However, the following comments do provide some food for thought.

Gross Profits: Regional variations in gross profits were not large, as Table 7 reveals. It can be noted, however, that Mountain and Pacific dealers reported slightly higher gross

profits than did the dealers in other regions, while dealers in the East and Middle West reported lower than average gross profits.

Total Operating Costs: Total operating costs during 1946 were less than the national average in the East and Middle West, although this picture changed somewhat in 1947.

Net Profits: Regional differences in net profits were slight, with the lowest profits in the East.

Variations by Volume

Dealers whose 1946 sales were between \$150,000 and \$250,000 reported the highest gross profits in the NERA survey. In 1946, gross profits for dealers in this sales volume bracket were 35.1%, and 36.5% in 1947.

In the matter of net profits, the largest dealers were lowest, but it is also to be remembered they had both smaller gross profits and higher operating costs.

Costs: Table 8 represents a comparison of costs of dealers of different sizes. From these figures, it will be noted that the smallest dealers and the largest had the highest occupancy expenses, suggesting that the medium sized dealers were the most efficient in holding down occupancy expense.

Larger dealers, on the other hand, spent more proportionately on total sales costs than did the smaller dealers.

The smallest dealers, significantly, had the highest ratios of advertising costs to sales. This means they did some advertising, but because sales were small, the amount spent was a

higher percentage of their sales volume.

The smallest dealers also had the highest administrative expense, and the next highest expense was reported by the largest dealers.

Again in the expenses for servicing there were further variations. The least expenditure for service was reported by the smallest dealers. Less than average servicing costs were reported by the largest dealers, but the variation here may once more be due to higher volume.

The smallest dealers had the lowest total operating costs, mainly because their sales and servicing costs for both 1946 and the first six months of 1947 were considerably less than the average.

High and Low Profit Dealers

This study investigated differences among high and low profit dealers, with results tabulated in Tables 10 and 11.

For purposes of comparison, high profit dealers have been designated as those who net profits of 15% or more for the year and a half study period. Low profit dealers are designated here as those who had net profits of 5% or less for the corresponding period.

A lesson in how to make higher profits is afforded by a study of the differences in the total operating costs of the high-profit and low-profit dealers. The typical high-profit dealer not only spent less in both 1946 and 1947 on occupancy expense than either the average or low-profit dealers, but he also reduced his total selling costs in



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JORDON REFRIGERATOR CO.



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1947; and altho he spent more on advertising than the average dealer, his advertising costs were still less than the typical low-profit dealer. Administrative expense was less for the high-profit dealer than both the average and low-profit dealers during the entire period under study. He spent a great deal more, however, on servicing than did either the average or low profit group.

High Profit or Low?

Thus we see that the high-profit dealers' total costs were considerably lower than the average or low profit dealers, altho the high-profit dealer trimmed most of his costs in order to put more stress and expense on service.

Characteristic of the low-profit dealer were low gross profits, high occupancy expense, high advertising expense, high administrative expense, and in 1947, low servicing expense.

Lessons to be Learned

1. *Importance of volume.* Volume cuts certain costs, and even if profit margins fall, you can still make higher net profits, if other costs do not rise.

2. *High-Profit vs. Low-Profit dealers.* By watching your costs and following the good example set by high profit dealers, you can increase your own net profit.

3. *Are your costs in line?* Some occupancy and administrative expenses are very high. If yours are high, take counsel with yourself to see if you can get them down. Likewise, you may not be spending enough on advertising and service. Those who spend more show higher profits. Even now in a seller's market, the man who goes out and sells still makes more money than the man who stands still and waits for business to come to him.

4. *Gross profit as it reflects necessity for higher trade discounts.* The drop in gross profits was compatible with higher net profits in the period of this study. But when the boom is over, costs will rise. If gross remains the same or continues to fall slightly, then the dealer will be squeezed. This raises the question of the necessity for higher trade discounts for the period which will come after the boom.

Contractors Found Plenty to Talk About Between Sessions



NARC discussions didn't end when the formal meetings broke up, as these corridor shots prove. ABOVE, LEFT—T. H. Ingersoll (right), of Ingersoll-MacElwee, Inc., Minneapolis, signs up S. R. Grouse (left), of Refrigeration Equipment Co., Minneapolis,



as a new member, as W. A. Minish, an associate of Mr. Grouse's, looks on. ABOVE, CENTER—W. L. Drake (left), of Drake Refrigeration, Indianapolis, quickly checks notes with Dale McCune of the same firm. ABOVE, RIGHT—H. L. McPherson (left),



Refrigeration Supply Co., South Bend, Ind., and Robert B. Newman (center), of Michigan Refrigeration Co., also in South Bend, learn about NARC activities in South Carolina from M. Harry Grace, veteran refrigeration man from Greenville, S. C.

CONTRACTORS . . .

Continued from page 44

on licenses and ordinances, codes, and general information concerning our industry. The cost of reproducing this material is prohibitive at the present time, and a plan has been adopted whereby it can be forwarded on a temporary basis to any association or member for their use and return to our library after it has served its purpose. We ask your cooperation in not tying up this material for a longer period of time than is necessary, so that it may serve as many members as possible.

"Your National Association has again experienced healthy growth during this last year. One year ago I reported to you that we had 15 Local Associations. Today that number has grown to 23. The new associations included on our list today are Chicago, Duluth-Superior, Fresno, Oregon State, Pittsburgh, Sacramento Valley and Toledo. Likewise, our "A" members and "AA" members' ranks have been expanded this year. The job of securing new mem-

bership is one that is never-ending, and needs the efforts of all of our members. The strength of any association can be measured in membership.

"This year posed many new problems. One of the major problems on which we have started to work and which will need considerable future effort deals with the confusion existing in our business with respect to plumbing, steam fitting, heating, and sheet metal business. We must reach clear lines of demarcation because of the special nature and the importance of our business. We must acquaint architects, consulting engineers, and general contractors with the fact that the refrigeration and air conditioning applications should be treated separately and respected as important special applications.

"Another problem which is important is that of warranties. The contractor has been seriously penalized in fulfilling guarantees and warranties which have been written primarily by manufacturers and without consultation with contractors. The point is presently proposed that the contractor should pass on to the consumer the manu-

facturer's warranty as it is given to him, rather than to indicate to the consumer that as a contractor he will fulfill all of the terms of the warranty. This matter has been discussed with manufacturers and has been taken under advisement by their Trade Relations Committee at the present time.

"During the past year a high failure rate of expansion valves, controls, and accessories have caused too many of our members a loss in time and money through no fault of their own. We have pitched in on many of these specific cases and have started the manufacturer thinking seriously of ways to improve this condition.

"Your national officers have proposed a testing laboratory procedure and have set about securing the finances to make such a program possible. I am pleased to report that many of our members have already subscribed funds to our laboratory program, and I encourage any of you who have not, to do so as soon as possible.

"The laboratory program is going to make available to our members information concerning the quality of many of the prod-



ABOVE, LEFT—Detroit's delegation to the National Association of Refrigeration Contractors convention gathers in its hotel suite to loosen up a bit at the close of the

convention's business sessions. ABOVE, RIGHT—C. J. Purdie, Jr. (right), of Detroit Cooperative Refrigeration Sales & Service, discusses the West Coast situation with



Bernard W. Shirar (center), Shirar Young Refrigeration Corp., San Francisco, and Zed Jones, secretary of the San Francisco contractors' association.

ucts which they use in their normal course of business. The program will not in any manner attempt to tell you which product you should buy. However, from the information passed along by the testing laboratory, you will be able to determine where your dollar does the most good, and you will be able to insure your customer that you are supplying material of the best quality. This program will encourage the manufacturer to produce trouble-free equipment of better quality than we have even known in our industry.

"A special committee will be appointed by your newly elected Board of Directors to carry on this testing laboratory work. Combine this effort with that of good, standard warranty for our members, and

we will have accomplished a task of major importance for contractors."

YORK NAMES OUTLET FOR BUFFALO AREA

K&S Cooling Corp., 11 Swan St., has been appointed exclusive distributor for York products in the Buffalo, N. Y. territory. The firm is a new one organized by Harold B. Stratton and William P. King. Mr. Stratton formerly was with the York distributor in Albany, N. Y., and Mr. King formerly was with the Chevrolet division of General Motors.

FARR NAMES HERRICK WHOLESALE SALES MGR.

Appointment of O. B. Herrick as wholesale sales manager has been announced by Warren W. Farr, president of Refrigeration Sales Corp., Cleveland refrigeration contracting firm.

Mr. Herrick has been engaged in the commercial refrigerationsales field for the past nine years in the northern part of Ohio. He is a former president of the Refrigeration Contractors Association of Cleveland, a certificate member of R.S.E.S., and an associate member of A.S.R.E.



NEW COOLING FIRM IN WHEELING, W. VA.

Kold Makers, Inc., has recently been organized in Wheeling, W. Va., to sell and service air conditioning, refrigeration and associated equipment in that area. The firm covers four counties in West Virginia and three in Ohio. C. H. Smith is president of the firm, with R. V. Pinto as vice president and J. M. Pinto as secretary and treasurer. Headquarters are at 3746 Jacob St., Wheeling.

GUILD GROUP MEETS ON LICENSING CODE

A committee of the Refrigeration & Air Conditioning Guild, Inc., of New York City, met recently with one of the city's councilmen to explore the steps to be taken in connection with the adoption of a refrigeration licensing code for contractors in New York City.

Members of the Guild committee were Robert A. Towse, president; Nathan Edelstein, vice president; Theodore Schwartz, chairman of the licensing code committee; Theodore A. Reina, chairman of the board of governors, and Morris H. Schneider, the Guild's business representative.

CHARLOTTE FIRM HAS NEW SHOWROOMS

Page Air Conditioning Co., Inc., Charlotte, N. C., recently opened its new showrooms and offices at 439 S. Tryon St.

"Why do they say PA-100?"

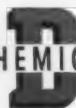
...because it's the easiest way to ask for
DAVISON PA-100
Refrigeration Grade
SILICA GEL



... and that, experienced service engineers know, is the surest way to get dust-free drying, maximum capacity, fast action, removal of acids and corrosive materials, freedom from caking and channeling — freedom from any further moisture problems. Naturally, leading service engineers demand the leading refrigerant drying agent.

Your jobber stocks Davison PA 100 Refrigeration Grade Silica Gel in factory-charged dehydrators — or in bulk in the can with the blue label.

THE DAVISON CHEMICAL CORPORATION
Progress through Chemistry



BALTIMORE-3, MD.

PIONEERS AND DEVELOPERS OF SILICA GEL

Canadian exclusive sales agents for DAVISON SILICA GEL:

CANADIAN INDUSTRIES LIMITED, Sales Division, Chemical Group

Golden!*



Spanning the entrance to San Francisco Bay is one of the greatest suspension bridges in the world, the Golden Gate. Including its approaches, it is almost two miles long, supported by two massive towers 746 feet high, and employing cables $36\frac{1}{2}$ inches in diameter, 7660 feet long, and spun from 27,572 individual wires. Begun in 1933, it stands as an impressive symbol of American engineering genius.

*The reward in economy, prestige, and performance when you choose Mills Condensing Units. Products of Mills Industries, Incorporated 4100 Fullerton Avenue, Chicago 39, Illinois

Mills Condensing Units

DON'T LET AIR STEAL YOUR POWER



**ARMSTRONG PURGER USER
CUTS HEAD PRESSURE 55 LBS.,
SAVES 25% ON POWER**

Before installing an Armstrong Purger head pressure in the refrigerating system of a prominent ice cream plant in Chicago was 185 psi. After the purger removed air and non-condensable gases from the system, head pressure dropped to 130 psi. Since each 4 lbs. decrease in head pressure means approximately 2% savings in power costs, the power bill was cut over 25%. It didn't take long to pay for this purger! Other dividends include the elimination of time formerly wasted in manual purging and reduction of refrigerant gas loss. You don't have to take any chances on Armstrong Purgers—they're guaranteed to give satisfaction. Write for details.

• How does an Armstrong Purger work? What's the theory behind efficient purging? Bulletin No. 173 discusses these things in some detail. Write for a copy.



1. SAVES POWER
2. SAVES LABOR
3. SAVES REFRIGERANT
4. INCREASES CAPACITY



ARMSTRONG MACHINE WORKS
889 MAPLE ST. • THREE RIVERS, MICHIGAN

Makers of Purgers and High Side Floats . . . Air Traps
Oil Separator Traps . . . Inverted Bucket Steam Traps

BTU's . . .

Continued from page 31

These four points, which any home freezer salesman should be able to use with telling effect, follow:

1. Freeze food, cooked or uncooked, that is not immediately eaten, thus making possible the economic use of left-overs.
2. Make use of packaged frozen foods, thereby eliminating the inevitable food loss involved in home processing and preparation.
3. Buy food in quantity, taking full advantage of "in season" prices, and freeze the surplus.
4. Prepare foods in quantity, thus saving time as well as fuel, and put the "extras" away in the home freezer.

● **Arithmetic—Modern Version.** Problem: If a farmer has 14 hogs, averaging 220 pounds per head, in 1941 and the same number and weight for sale in 1947, which year would his purchasing power be greater and by how much?

Answer: In 1941 he could trade his hogs for one nine-cubic-foot household refrigerator; in 1947 he would receive a refrigerator of the same capacity with a deluxe electric range, automatic toaster and \$20 in change thrown into the bargain.

This isn't hypothetical—it actually happened in Forest City, Iowa, the heart of the hog and corn belt. John Hanson, furniture store owner and Frigidaire dealer has been pricing his appliances and other merchandise in "hogs" instead of dollars. Hanson took his step, he says, to punch home the price relationship between "hard goods" and farm produce to his rural customers who have been remarking about "high merchandise prices".

His first customer, Merle Otis, a farmer west of Forest City, hooked up his farm tractor to two trailers and towed 14 hogs to Hanson's store. Farmer Otis departed with a new Frigidaire Cold-Wall refrigerator, an electric range of the same brand, an automatic toaster and \$20 change in his pocket. Before he left, Dealer Hanson reminded him that the hogs in 1941 would have purchased only the refrigerator.

THIS MAKES IT A MILLION



The millionth motor produced by Jack & Heintz Precision Industries, Inc. is proudly presented by Reber C. Stupp (second from right), vice president in charge of production, to Edward R. Legg (second from left), vice president in charge of sales, as Frank R. Kohnstamm (left), general sales manager, Harold W. Melampy (center), superintendent of the electric motor division, and Robert J. Ginn (right), general superintendent of production, look on.



WHAT'S UNDER THE SHELL?

If you're a "sucker" there is probably nothing under the shell.

Fortunately, there are very few suckers in the refrigeration and air conditioning field. But it's just as well to KNOW "what's under the shell" when you buy.

You expect good design, of course. BUSH design is better. You look for expert engineering too. BUSH engineering is definitely superior. You want top quality construction. Your own inspection will show BUSH construction is the best in the field.

But you should look for something more. The "hidden asset" that money can't buy. The advantage that can't be faked. The point the sucker always overlooks. The REPUTATION of the manufacturer.

BUSH Heat Transfer Products enjoy a widespread preference among refrigeration and air conditioning engineers, installation and maintenance men. These men know from

experience that BUSH Products give long, trouble-free service . . . greater customer satisfaction.

Look for the BUSH Trade Mark on the heat transfer products you buy. *There's PROFIT under the BUSH shell for you!*

BUSH MANUFACTURING COMPANY
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415 LEXINGTON AVE., NEW YORK-540 W. WASHINGTON BLVD., CHICAGO, ILL.
EXPORT ADDRESS: 13 EAST 40TH ST., NEW YORK, N. Y. — CABLE "ARLAB"



NEW DEFROST SYSTEM . . .

Continued from page 38

line, and starting the condensing unit and fan on the cooling unit to repeat the refrigeration cycle.

The defrosting capacity, expressed in heat units, depends on the temperature to which the solution is allowed to cool before the refrigeration cycle is again repeated. This is controlled by the differential setting of the thermostat and is adjustable over a wide range.

Duration of the defrost cycle or

speed of defrosting is determined by the temperature of water in the Defrostolator. This can be varied over a wide range and is controlled by the temperature setting of the thermostat.

Duration of the refrigeration cycle depends on the time required to replace heat units lost by water in the Defrostolator during the defrost cycle, as represented by the differential setting of the thermostat. Response to this setting depends on the rate at which heat is added to the water and is controlled by a rheostat having a wide range of adjustments.

An important advantage of the Tenney automatic hot gas defrost system is that any form of heat may be used for defrost purposes. An example of this is cited in the application of the system to low temperature refrigerated trucks where use is made of the heat in engine exhaust gas that otherwise would be wasted. The standard form of Defrostolator used in this system is equipped with a low wattage electric immersion heater, but it also can be furnished for use with steam, gas, or other forms of heat source.

Because of this flexibility as to heat source, system is adaptable to a wide variety of applications, though currently being used exclusively on holding room service for frozen foods.

Seventeen sizes of the system are available at present, in refrigeration

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Suction Pressure Regulators

Quick Couplers

Ask your jobber for complete details

Electrimatic

2100 INDIANA AVE.

CHICAGO 16, ILL.



"Aha, Thorndyke! I warned you that you should have built a larger locker plant!"

capacities ranging from approximately 1/3 ton to 3 tons. Defrostolator tank sizes vary from 24x12x20 inches to 36 x 18 x 24 inches. Standard equipment includes one or more Tenney unit coolers equipped with Tenney thermostatic expansion valves, a single Defrostolator, and a complete set of defrost controls for simultaneously defrosting all unit coolers furnished with the system. Not included is a liquid suction line heat exchanger which should be used on all low temperature installations.

Capacity of cooling units regularly furnished is based on 12-degree temperature difference, but variations from this standard can be supplied. Unit coolers and Defrostolators are insulated and are regularly furnished in black or maroon crackle finish on the outside surfaces.

COURTESY COUNTS . . .

Continued from page 42

phone number, and also list the types of appliances serviced.

Each serviceman, after completing a job, is required to call these decals to the attention of the housewife and



to courteously request her permission to paste one of them inside the door of the refrigerator or in some other inconspicuous but readily accessible place. The handsome appearance of the decal, plus the frank explanation that the company would like to handle any further service work which the customer might require, invariably gets results.

Bechtold is firmly convinced that this four-point courtesy campaign pays off handsomely in the only way that counts—increased business volume. Courteously handled service calls, he insists, are the best possible advertising which any service organization can have.

CHASE BRASS NAMES OFFICERS, DIRECTORS

Officers of Chase Brass & Copper Co., Inc., elected at the annual meeting were: Charles E. Hart, president; R. D. Ely, W. C. Husted, J. R. Van Brunt, vice president; Sherman H. Perry, vice president in charge of mill sales; John S. Coe, vice president in charge of Cleveland operations; Rodney Chase, vice president in charge of public and industrial relations; John H. Gilbert, treasurer; Richard R. Quay, secretary; L. J. Schuster, V. W. Heyden and Robert C. Smith, assistant treasurers; E. H. Madison and C. K. Lenz, assistant secretaries.

Directors elected were: Charles E. Hart, E. T. Stannard, C. T. Ulrich, R. L. Coe, R. D. Ely, S. S. Jackson, J. H. Gilbert, Rodney Chase, J. R. Van Brunt, F. A. Jackle, W. C. Husted and S. H. Perry.

OUTLETS NAMED FOR GERMICIDAL LAMP

Refrigeration wholesalers, for the most part, comprise the list of outlets for the "Sterilaire" ultra-violet germicidal lamp being manufactured by Ultra Violet Products, Inc., Los Angeles, for use in walk-in coolers.

Among the outlets named so far are: N. O. Nelson Co., Houston, Tex.; Peerless Pacific Co., Seattle, Wash., and Portland, Ore.; Rauch & Monroe, Oakland, Calif.; Refrigeration Service, Inc., Los Angeles; Texas Refrigeration & Supply Co., Fort

Worth; United Refrigeration Co., San Antonio, Tex.; Van's Supply, Long Beach, Calif.; Western Appliance Corp., Denver.

ACE MOVES SALES OFFICES

Ace Cabinet Corp. is moving its sales department from New York to its newly acquired plant in New Bedford, Mass. Nelson S. Bloomenstien, sales manager of Ace, has moved to his new quarters, and all correspondence should now be addressed Ace Cabinet Corp., New Bedford, Mass.



Stud Book



Thoroughbred horses and pedigreed livestock have nothing on SAFETY HEADS for complete "family" records. Every SAFETY HEAD rupture disc is entered in the SAFETY HEAD Stud Book according to type, size, pressure rating and other factors. SAFETY HEAD rupture discs burst in tension at pre-determined pressure . . . offer a full-throated, pipe-size relief vent. Ideal for either gases or liquids. Replacement discs quickly provided by checking the records. Write today for latest catalog. Address Special Products Division, Black, Sivalls & Bryson, Inc., Power and Light Building, Kansas City 6, Mo.



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It's the only control with all these advantages "in one package":

Set it and forget it!

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- ▶ SEPARATE PRESSURE LIMITING
and when necessary:
Quick Capacity Change • Easy-to-change Pressure Limit

Why carry several valves when there is a THERMO-LIMIT valve for ANY job? The Thermo-Limit will save you trouble, time and money.



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of Thermostatic Expansion
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Regulators; Solenoid Valves;
Float Valves; Float Switches.

ALCO VALVE CO.

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REWA...

Continued from page 33

adequate statistical data in enabling REWA to better represent its members in discussions with manufacturers, both in seeking possible adjustments and in getting new lines for distribution through REWA firms.

In an address at the afternoon



Photo by Austin Jones, Kerotest Mfg. Co.

Eric E. Eberling (left), who earned the distinction of being the man to travel the greatest distance to see this year's All-Industry Show by virtue of his 8000-mile trip from his hometown of Sydney, Australia, tells Irving Alter of the Harry Alter Co., Chicago equipment wholesaler, and William Rinelli of Ansul Chemical Co., some interesting facts about refrigeration conditions in the land "down under". Eberling represents the F. C. Lovelock Pty., Ltd., refrigeration wholesaler in Sydney.

REWA session, Warren W. Farr, president of the National Association of Refrigeration Contractors, expressed a wish for close future co-operation between REWA and NARC. Contractors, Farr asserted, rely on wholesalers for the supplies that enable a more flexible operation of the contractor's business.

"We recognize the wholesaler's place in the distribution of certain types of products and have no thought of competing with him," he declared. "There is nothing in our constitution or our plans for a cooperative buying setup."

Farr said that NARC was hopeful that present problems would be worked out in future conferences of wholesaler and contractor representatives.

RSES

Jam-packed educational programs, as always, keynoted the 10th annual convention of the Refrigeration Service Engineers Society held in the Hotel Hollenden, Cleveland, during the week preceding the All-Industry

Refrigeration and Air Conditioning Exposition.

The group's business session, too, was unusually active, as new officers and directors were elected and numerous changes were made in the organization's constitution and by-laws. Chicago was selected as the site of the group's next annual meeting.

William Marshall of Toronto, Ontario, Canada, was elected to head the RSES for 1948. Other officers for the current year are: Charles C. E. Harris, Cambridge, Mass., 1st vice president; A. L. Robertson, Madison, Wis., 2nd

vice president; H. T. McDermott, Chicago, secretary; M. R. Hanks, San Diego, treasurer; W. E. Booth, Richmond, Va., sergeant-at-arms; and Paul Reed, Milwaukee, Wis., educational chairman.

In accordance with a constitutional change providing for an increase in the board of directors from seven to 10 members, and an extension of their term of office to two years, the following five men were elected as directors for one-year terms, in order to provide for replacement of five directors each year: Earl Yockey,

Announcing

CAPACITRON

UNIVERSAL REPLACEMENT

Motor Starting

CAPACITORS

Capacitron A.C. motor starting replacements are of the same type and quality as supplied to leading motor manufacturers for original equipment. Designed for quick and easy mounting, they are ruggedly built to the highest electrical and mechanical standards. 95% of all service jobs can be serviced with a comparatively small stock. Because Capacitrons are hermetically sealed in time-tested metal cases, there can be no leakage or breakage problems. And, best of all, Capacitrons cost you no more. If you want to consistently turn out profitable, trouble-free capacitor replacement jobs—insist on Capacitrons. Your jobber will help you get started.

CAPACITRON Division

JEFFERSON ELECTRIC COMPANY, Bellwood, Illinois

AVAILABLE SOON THROUGH YOUR LOCAL JOBBER

Columbus, Ohio; Napoleon Brossoit, Montreal, Quebec, Canada; W. Tierney, Massachusetts; C. S. Tucker, Birmingham, Ala.; and J. L. Driskell, Burley, Idaho.

The five directors elected for full two-year terms were: C. O. Yates, Washington; C. E. Nisel, Texas; Floyd Lilley, Illinois; Cecil Visger, Missouri; and J. V. Berger, Colorado.

Other constitutional changes effected provide for an increase in dues, initiation fees, and chapter taxes; recognition of sectional groups representing two or more states; forma-

tion of a committee to prepare the annual budget; and the automatic transfer of membership of a member who moves from the jurisdiction of one chapter to the jurisdiction of another.

Selection of the Stevens Hotel in Chicago as the location of the 11th annual convention, scheduled for Nov. 20-23, 1948, was made by the new board of directors following the final business session.

In conjunction with the convention, a contest was staged to determine the best service trucks brought



Photo by Irving Alter, Harry Alter Co.

For the first time in the industry's history, the educational sessions of both the Refrigeration Service Engineers Society and the National Association of Refrigeration Contractors were recorded for posterity, thanks to the efforts of Tom Alexander (above), an RSES member from Denver, Colo. Both groups plan to make these recordings available to regional associations for the benefit of those members who were unable to attend the national conventions.

to the convention. Refrigeration Maintenance Corp., Cleveland, won first place in the commercially built division, while Nichol Electric Equipment Co., Medina, Ohio, topped the classification for owner-built trucks.

Topics for the educational program ranged all the way from such highly technical subjects as "Two and Three Stage Systems," by Thomas Lopicola, chief engineer of Bowser, Inc.'s, refrigeration division, and "Solids in Refrigerating Systems," by Dr. W. O. Walker, director of research and development for Ansul Chemical Co., down to the "how not to do it" hints contained in the talk on "Safety," by



E. A. Thiele (left), sales manager of Kold-Hold Mfg. Co., talks things over with Ted Schroeder, one of the company's ace salesmen, who seems to be "hitting the ball" in the refrigeration business just about as well as he does on the tennis court. Ted, in case you don't read the sports pages, has been a top flight tennis star for several years, and turned in a particularly brilliant performance as a member of last year's triumphant U. S. Davis Cup team.

LET THIS DISPLAY REMIND YOU

... that THAWZONE and TRACE are two "musts" in protecting refrigeration systems and keeping them functioning perfectly with the minimum of attention.

THAWZONE, active, always circulating, destroys moisture chemically, economically, quickly and effectively, in new, reconditioned or old systems.

TRACE is the highly effective refrigerant leak detector with the vivid red color that quickly spots leaks in any refrigeration system . . . new, old or reconditioned.

You will see this attractive display on the counters of leading refrigeration equipment wholesalers throughout the country.



HIGHSIDE CHEMICALS COMPANY
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George J. Schuld, Sr., a practicing serviceman from Cleveland.

Other talks presented at the technical sessions included: "Water Towers and Evaporative Condensers," A. M. Fenwick, Cleveland refrigeration consultant; "Servicemen—What of Your Future?" A. M. Schmitz, northeastern district manager, Servel, Inc.; "Leak Detection," George H. Clark, director, Detroit Air Conditioning Institute; "Reverse Cycle Refrigeration," Paul B. Reed, manager of the refrigeration controls division of Perfex Corp.; "Refrigeration of Fresh Meats," John Spence, service manager, Hussman Refrigeration, Inc.; "Truck and Trailer Refrigeration," Albert Sawyer, refrigeration engineer, Dole Refrigerating Co.

An interesting demonstration of the possibility of applying Bell Telephone System's mobile telephone service to the refrigeration service business was staged by members of the engineering staff of Ohio Bell's Cleveland office.

"HOUSEWIVES should look to their refrigerator and range instruction booklets as important factors in the nationwide effort to stretch their food supply and save food dollars," according to Verna L. Miller, director of home economies for Frigidaire Div.

"Often food will be lost through inadequate refrigeration or faulty cooking due to lack of knowledge by the housewife," explains Miss Miller. "Yet this situation is easily corrected since range and refrigerator manufacturers usually include a booklet that not only explains how the appliance operates but also gives directions for preparing tasty foods economically."

SPECIALTY SELLING CITED AS KEY TO SURVIVAL

Describing 1947 as "the greatest year of all times in refrigerator dollar volume and second greatest in actual number of units sold," H. M. Kelley, appliance sales manager for Frigidaire Div., predicted that 1948 holds an even greater potential, when he addressed members of the National Retail Dry Goods association recently.

At the same time, Kelley warned that 1948 may be a crucial year in the industry for the manufacturer, wholesaler and retailer. "It will be a year of adjustment, jockeying for position, fence mending and organi-

zational strengthening—it may well set the pattern for the entire future of the industry by determining what brands will survive and what retailers will dominate their respective markets.

Turning to what he termed as the "heart of the trouble," Kelley said that there are probably too many dealers, too few salesmen and a great majority of retailers who either cannot or will not take seriously the threat of the critical period that is just ahead for them.

Kelley described specialty selling

as the key to survival during a possible chaotic period of price-slashing and dumping, that can be expected as "surplus" dealers unload inventories and fight to stay in business.

"Stores must necessarily exert every ounce of sales management ability at their command," he concluded. "However, in the long run they will find security in an adequately-staffed force of specialty salesmen. In the final analysis, it is this hardy species of selling men who hold the key to growing sales volume in the appliance merchandising field."

EASY-FLO BRAZED CONSTRUCTION

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It's a familiar story today

A great number and variety of parts, formerly cast, forged, machined from the solid, or assembled by threading, bolting, and riveting, have been redesigned for EASY-FLO brazed construction. And you'll find a great many modern products around today, which were designed for it from scratch.

The reasons are clear: (1) the speed and reliability of EASY-FLO brazing; (2) the ability inherent in this low-temperature free-flowing silver alloy to make joints that equal or exceed the solid metals in strength, ductility, leak-tightness and other essen-

tial properties; (3) the far fewer machine-hours and man-hours required for EASY-FLO brazed construction—particularly where assemblies are prepared for brazing with the alloy preplaced—and fast heating methods are used.

BULLETINS 12-A and 15 will give you the facts. You'll find it well worth your while to write for them today.

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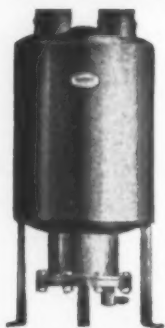
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Aminco Oil Separators protect compressors by maintaining correct oil level in crankcase and by excluding oil from refrigerant stream they enable coils, condensers, valves and dehydrators to function most efficiently.

These oil separators are made for jobs from 1/2 H.P. to 120 tons and are used everywhere, ashore or afloat, where efficient refrigeration is desired.

Full descriptive bulletins on request.

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Expert Borg-Warner, 310 So. Mich., Chicago



Sidewalk Selling

SIDEWALK traffic can bring a retail food merchant a profitable chunk of bonus business which store traffic alone would never pull. That was the cogent reasoning which prompted Kenneth Gertenbach, owner of a neighborhood meat and grocery store on Milwaukee's East Side, to devise a means of converting a goodly number of these casual passersby into cash customers.

Taking a tip from the street vendors whose wares are always on public display, Mr. Gertenbach arranged to have a Federal meat display cabinet built right into his store's show window so that it actually formed a part of the store front. Well lighted and with various types of meat and produce attractively displayed, this cabinet has proved to be a real "crowd stopper."

No sooner was this cabinet installed, Mr. Gertenbach reports, than it began to pay for itself. The first Thursday after the case was placed in operation by Federal Store Equipment Co., Mr. Gertenbach arranged a fish display in this sidewalk showcase. Result: fish sales that weekend showed an increase of 200%. And that's just the way things have been going ever since, says the jubilant market owner.

Sales figures indicate that this sidewalk case is attracting the attention of many passersby who evidently would not take the trouble to stop and look at a display located inside a show window. At night the case is well lighted, and Mr. Gertenbach has personally made a number of spot checks which have shown that at least 50% of the people passing by stop to look at the contents of this cabinet.

The case itself is a standard 12-foot model with triple-glass display front and service access doors at the rear of the case opening into the store interior. It is not a self-contained cabinet, and refrigeration is supplied by the same 1-hp General Refrigeration condensing unit which cools the other cases in the market.

Despite its unorthodox location, this case is held at 36 to 38 F the year around. And experience has indicated that only when the sun shines directly on the front of the case does it require any extra refrigeration. Even then, Mr. Gertenbach declares, the compressor does not run sufficiently longer to make any major difference in operating costs.

MORE NEW PRODUCTS . . .

Continued from page 35

8, 15 and 22 cu. ft. storage capacity.

Each of the units has a freezing section of 2½ cu. ft. size, and storage areas of 5½, 12½ and 19½ cu. ft., respectively. Convenience features include easy set controls, removable dividers and baskets, rounded interior for easy cleaning. Insulation is 5" thick, and models are equipped with condensing units of ¼, ⅓ and ½ hp, respectively.

Halsey Taylor Shows New Water Coolers

The Halsey W. Taylor Co. introduced Model HT10, a bubbler type water cooler with hermetically sealed condensing unit. The cooler, with cabinet of bonderized steel finished in metallic gray, features automatic stream control, 5-quart capacity storage tank, and 2½" of granulated cork insulation.

The automatic stream control is said to maintain the drinking stream at a uniform height; projector (bubbler) is said to provide absolute sanitation and to meet all health requirements. Condensing unit is spring mounted to eliminate vibration; Freon-12 is the refrigerant used.

Self-Contained Ice Cream Freezer Shown

Shown by Emery Thompson Machine & Supply Co. were two 20-quart ice cream freezers, one of them self-contained with compressor and other equipment installed in the base of the cabinet assembly. The self-contained unit is available with either 2 hp water or 3 hp air cooled unit, and the same capacity units are recommended for the remote type freezer. Ice cream hardening cabinets, ranging in capacity from 70 to 150 gallons also are available from the company.

Bally Has New Display Case Series

Bally Case & Cooler Co. introduced two new series of display cases: Series 36, for the combination grocery and meat store, and Series 363,

for delicatessen store use, designed for maximum display in minimum space.

Both series of cases are available in 6, 8, 10 and 12 foot lengths. Display space in the Series 36 line ranges from 16 to 34 sq. ft., and storage area from 17 to 35 cu. ft. In the 363 Series, display area is from 21 to 45 sq. ft., and storage area from 13 to 28 cu. ft.

Exterior of the units is of vitreous porcelain, with triple ¼" glass in front, molded rubber sliding doors

for service, and 4" of insulation. Porcelain platters are furnished with every case as standard equipment. Display section is fitted with double fluorescent lights.

Beverage Cooler Line Shown by Colbar, Inc.

The dry beverage cooler line shown by Colbar, Inc., Columbus, Ohio, includes four models varying in capacity from 17 to 42½ cases of bottled goods. Model SC-170, the smallest unit, is 58" long, while the

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Water Coolers CONNECTIONS MARKED ON CASTING

Soda Coolers NO FREEZE-UP NOTE ALUMINUM CASTING

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LIQUID AND REFRIGERANT CANNOT LEAK INTO EACH OTHER

Simple, Sanitary, Compact. They require but small refrigerant charges. Sanitary operation. All tubing embedded in aluminum.

THE HEAT-X-CHANGER CO., INC.
415 Lexington Avenue, New York 17, N.Y. Brewster, N.Y.

largest unit, Model 425, is 90" long. All units have a uniform height of 32".

Units have baked-on enamel exterior finish, designed to resist alkalis and to stand abuse; corners are rounded. Lids are of the hop-over type, moving either right or left, and are of stainless steel.

Hold-over plates inside the cabinet provide stored refrigeration, and a utility shelf in the refrigerated area affords storage space for small additional food items.

Wilson Sells Freezer As Home Necessity

In connection with a complete display of its line of Zerosafe line of home freezers, Wilson Refrigeration, Inc., has launched a follow-through campaign designed to sell the home freezer as a necessity in the home of today.

In an attractive booklet titled "The Modern Family Freezer," the company points out that in today's home, the modern freezer does not cost, it

pays—in reducing the number of shopping trips, enabling quantity buying, and allowing saving of foods of almost all types.

Ease of freezing foods at home also is stressed in the booklet, centerpiece of which is a rotating frozen food budget for a 25 cu. ft. Wilson family freezer, prepared by Donald K. Tressler, and showing a net profit of \$254.85 per year from use of the freezer.

The booklet shows the complete Wilson line, and outlines structural advantages of the freezer units.

2 new appliance testers by Simpson

MODELS 391 and 392
A.C. - D.C.
Volt-Wattmeters

INSTRUMENTS THAT STAY ACCURATE

These two Simpson testers are designed for simultaneous reading of volts and watts. Each has two separate 3" square meters, one for volts and one for watts. Each has built-in cord and plug for connecting to line outlet, and receptacle for connecting appliance under test. There are no leads to connect. Readings register immediately when plugs are connected. Separate, uncrowded scales make quick, accurate readings easy. Each meter has two ranges, selected by separate toggle switches with positions clearly indicated by white figures recessed in the molded bakelite case. The low power consumption of these instruments and their high efficiency result in negligible loss and error in reading.

Model 391 (3000 watts max.)

Ranges, A.C. or D.C.

Volts: 0-130, 0-260

Watts: 0-1500, 0-3000

Size: 3" x 5 7/8" x 2 1/2"

Weight: 2 lbs.

Shipping Weight: 3 lbs.

Dealer's Net Price.....\$30.00

Model 392 (5000 watts max.)

Ranges, A.C. or D.C.

Volts: 0-130, 0-260

Watts: 0-1000, 0-5000

Size: 3" x 5 7/8" x 2 1/2"

Weight: 2 lbs.

Shipping Weight: 3 lbs.

Dealer's Net Price.....\$35.00

SIMPSON ELECTRIC COMPANY

5300-18 West Kinzie Street

Chicago 44, Illinois

In Canada, Bach-Simpson, Ltd.

London, Ont.



Latherette Carrying Case—\$5.00



"Ameri-therm" Conditioners Using Sealed Units

American Thermal Industries, Inc., Detroit, announced at the Show that its 3, 5 and 10 ton store conditioners are being equipped with hermetically sealed condensing units (Servel). Features claimed for the units include ease of access for servicing; sectionalized construction, enabling their installation either as packaged systems or in remote sections; cleanable tube condensers; and a "slug-proof" control system, said to assure unloaded startings and no liquid "slugs."

Hermetic Condensing Units Introduced by Liberty

Liberty Motors & Engineering Corp., Baltimore, introduced 1/4 and 1/2 hp models of its hermetic condensing units, and said that 1/2 and 3/4 hp models will be announced later. Units feature balanced eccentric compressor, with two horizontally opposed cylinders 180° apart; this is said to result in an inherently balanced crankshaft, eliminating counterweights and flywheels and avoiding vibration.

Pressure lubrication is provided by built-in impeller, maintaining constant pressure to all working parts. Condenser is of fin and tube type, shrouded to make entire surface effective. The units carry a one-year warranty.

Mitchell Shows Window Air Conditioner Unit

Mitchell Mfg. Co. showed its room air conditioner for window mounting. The unit is designed for year-around use and ease of installation and operation are claimed as principal features.

tures. No water connections, ducts or pipes are required. The conditioner, Model M-10, is designed to serve areas up to 300 sq. ft.

Filter-Dehydrator unit Tops Sporlan Display

Sporlan Valve Co.'s exhibit featured that company's "Catch-All" filter-drier unit. This unit has a porous cylinder molded of minute particles of a highly efficient desiccant. After being assembled, these units are then activated to a high degree of dryness and are then sealed with moisture-proof seals. Because of the molded construction of the cylinder, the desiccant cannot powder or pack, nor can the refrigerant channel around the desiccant. It is claimed that the unit will catch all foreign matter as minute as 9 microns with negligible pressure drop.

Linde Display Features Smaller Cylinders

Smaller, more readily portable oxy-acetylene cylinders especially designed for refrigeration service men were the center of attraction in the booth of Linde Air Products Co. These units are about two-thirds the size of the normal cylinders, which greatly facilitates their use by the serviceman in his soldering and brazing operations.

Bakery Display Case Added to "Sterling" Line

Minneapolis Showcase & Fixture Co. introduced a new "Sterling" refrigerated bakery case in 6 and 8 foot lengths, available in exterior finishes of natural oak, natural birch, walnut finish birch, mahogany finish birch, and white porcelain. Cases are only 40" high, making them usable as wrapping counters as well as display units.

Besides the display area, additional storage space is afforded to allow replacement of goods sold. Cases have interior fluorescent lighting, triple-pane glass, and gravity-type coiling. Either self-contained or remote models are available; self-contained models are complete with matching end cabinet and heavy-duty condensing unit.

A-1

Airserco Start-O-Metic UNIT STARTER and ANALYZER

these features:

- Starts Hermetic and Open type units • Reverses Hard starting units
- Full Range Capacity and Phase starter • Test Circuit Continuity and Voltage • Tool-Kit size 5x4x3, Weight 2½ lbs. Impressive looking and creates customer confidence.





With the Airserco Start-O-Metic Analyzer you don't guess....you know! And when you know you're right, you work swiftly and confidently.



Short Cuts for the Service Engineer

Airserco Start-O-Metic ANALYZER.....\$14.50

SEE YOUR JOBBER OR FOR MORE "KNOW-HOW" WRITE

AIRSERCO

MANUFACTURING CO., INC.

435 MELWOOD ST. PITTSBURGH 13, PA.

100% Sanitary




ACE takes pride in introducing the first completely sanitary fountain . . . passed by the New York City Department of Health.

OFFICE OF THE CITY CLERK
DEPARTMENT OF HEALTH
BUREAU OF SANITATION
NEW YORK CITY

Document A, 1947

This is to certify that the above named fountain was examined on September 24, 1947, and was found to be in compliance with the requirements of the Sanitary Code of the City of New York, Chapter 24, Section 24-111, and was approved for use as a public drinking fountain.

Very truly yours,
JOHN J. KELLY
City Clerk



ACE CABINET CORP.
NEW BEDFORD, MASS.

Manufacturers of: Ice Cream Dispensing Cabinets, Upright Ice Cream Storage Cabinets, Home and Farm Freezers, Frozen Food Display Cabinets, Creamer Soda Fountains, Bobtails and Sandwich Units.

Many New Tool Items Announced by Bonney

Main feature of the exhibit of Bonney Forge & Tool Works was a large hand which moved up and down operating a large reversible ratchet. The ratchet turned a 7-foot disc on which were mounted over 200 hand tools.

During the show Bonney announced a number of new refrigeration tools such as a reversible ratchet, small hack saw, offset screw drivers, small plier set, clutch head screw drivers, hexagonal keys, a bushing driver set

and a flaring tool.

To help refrigeration jobbers in their sales efforts, Bonney introduced a jobbers' salesman sample board. This board is designed to be carried by jobbers' salesmen on their round of calls and shows samples of the various popular refrigeration tools in the Bonney line. The back of each board is constructed to hold eight Bonney pocket size catalogs for distribution to service men. The boards are 16" x 22" and are equipped with an easy-grip handle for carrying.

"Fishkeeper" Cabinet For Storage and Display

Shown by National Production & Sales, Inc., at the Show was the "Fishkeeper," a cabinet designed for the storage, display and sale of all kinds of fish and seafoods. The unit is said to eliminate the objections formerly encountered when standard cases were used for this particular purpose.

The unit incorporates its own ice making equipment (240 lbs. per day with $\frac{1}{2}$ hp unit, 180 lbs. with $\frac{1}{3}$ hp unit), and has specially designed aluminum freezing trays. Exterior of the unit is of stainless steel, with rounded corners, and insulation is 4" thick all around. Storage sections are of stainless and non-corrosive construction, with space for 400 lbs. of boxed or packaged seafoods. Display department holds an additional 300 lbs.

Display department carries a temperature of 34-38 F, and the same temperature is maintained in the fresh storage section. Frozen storage section is carried at 10-20 F.

New Ceiling Unit Shown By Refrigeration Appliances

Introduced by Refrigeration Appliances, Inc., was a new ceiling type unit cooler, with white baked enamel finish, rounded corners, and hinged drain pan to permit easy access to the unit for servicing.

The unit is being produced in basic ratings of 150, 230, 300, 400, 550, 750 and 1000 Btu.

Honeywell Shows New Electronic Controls

Introduced by Minneapolis-Honeywell were new models of electronic temperature controls, featuring thermostats with no moving parts. The thermostats have wire winding; and the wire changes resistance value with a change in temperature.

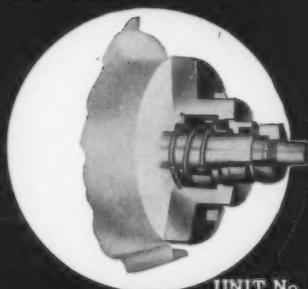
These changes are picked up by an "amplifier" and are magnified to provide sufficient current to operate dampers, valves, etc.

Several advantages are claimed for the new controls, chief of which is their extreme sensitivity. With the electronic control units, it is claimed, it is possible to measure the rate of change of temperature rather than the amount of change, as with stand-

Rotary Seal REPLACEMENT UNITS

are available not only for the smaller size compressors normally used for household refrigerators, but also for...

MANY OF THE
LARGER SIZES AS
USED IN COMMERCIAL,
SEMI-COMMERCIAL AND
AIR CONDITIONING
INSTALLATIONS

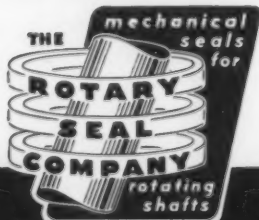


UNIT No. 9444

YOU GET *All* THE IMPORTANT BENEFITS
WITH
ROTARY SEAL

- ✓ SIMPLICITY IN CONSTRUCTION
- ✓ SIMPLICITY IN INSTALLATION
- ✓ SIMPLICITY IN OPERATION

*Available for over 848 models
as shown on our stock list*



See your jobber!

2020 NORTH LARRABEE ST. • CHICAGO, 14, ILLINOIS, U.S.A.
CANADIAN AGENT: 2025 ADDINGTON AVENUE • MONTREAL, 28, QUEBEC, CANADA

ard units; also, in multiple installations, 15 or 20 thermostats can be tied-in together and be controlled from the average of them all.

Units are unaffected by dust and dirt, and cannot get out of calibration, it is claimed. A simple two-wire low voltage connection circuit is employed.

G-E Stages First Postwar Showing of Many Products

First postwar showing of several items of commercial refrigeration equipment, including reach-in refrigerators, beverage coolers, milk coolers, frozen food display cases, and sectional walk-in coolers was staged by General Electric Co.'s air conditioning department. Also on display was the company's line of hermetically sealed condensing units, ranging in capacity from 1/6 to 1/2-hp and designed for either capillary or expansion operation. G-E's line of open type units, now expanded up through 1 1/2-hp, also was shown.

Quick Couplers Shown By Electrimatic

Quick couplers designed to facilitate connecting gauge, pressure, or vacuum lines with valves, evaporators, condensers, or gauge sets were a featured item in the display of Electrimatic Div. These units feature a "fingertip surface" to allow a firm grip with little chance of slipping. A mere twist of the wrist completes a tight connection. An improved model of the company's liquid line indicator, featuring increased visibility through use of a chrome reflector against a black background, also was on display.

6-Way Faucet Tops Display of the Cornelius Co.

A 6-way faucet capable of delivering the proper proportion of carbonated water with any of 5 different syrups constituted the chief point of interest in the booth of Cornelius Co. This faucet is available either separately or as a complete dispensing unit. The company's regular line of beer dispensing equipment, including the new double-action LX foam control faucet, also was exhibited.

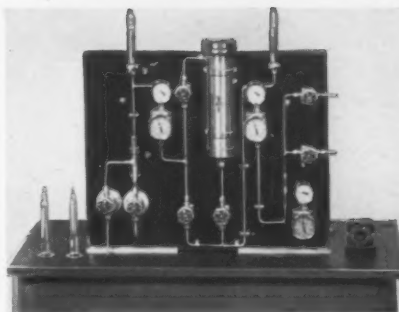
Endless Construction Features Bally Super Market Case

A super market top display case of "endless" construction which permits the addition of any number of like cases to form a continuous unit was highlighted by Bally Case & Cooler Co. Measuring 40 inches wide and 50 inches high, these units are available in 8, 10, and 12-foot lengths. Special fish and poultry sections also are available. Illumination is provided by fluorescent lamps located at the bottom as well as at the top of the display glass panel.

New NEMA Standard Motor Shown by Wagner Electric

A new 66-frame, 3/4-hp motor, the first to completely conform to the new motor standard established by the National Electrical Manufacturers Association, was the featured item in the display of Wagner Electric Corp. Embodying a completely new design in order to meet the NEMA specifications, this motor is considerably more compact than the 3/4-hp unit which supercedes. Other features include a new base and a 3/4-inch shaft diameter.

Revolutionary DFN DEHYDRATOR now makes Drying a Reality!



*Proven at the
Cleveland Show*

*—now available at
your wholesaler*

Picture at left shows the demonstration set-up at the recent Cleveland Refrigeration Show.

Read this amazing demonstration and the results!

- A full teaspoonful of water was put into the unit ahead of the drier, in each test.
- An average of 14 such tests were made daily with a single DFN Dehydrator, yet no moisture came through, as proved by the DFN Moisture Indicator. The Dehydrator continued to operate efficiently.
- Operation was at suction line temperature of below -20° F.
- Liquid refrigerant entered dehydrator at temperatures from 100° to 110° F.
- Operation is effective up to 150° F. 24-hour operation lowers moisture content of gas for safe running at -60° F.

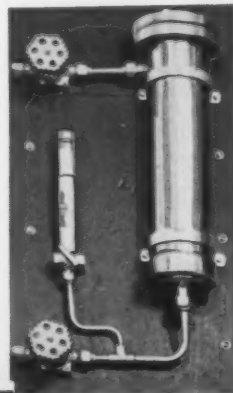
NEW DFN FIELD SERVICE KIT

Shown at the right is the DFN Service Drying Kit as used in the above demonstration. These kits consist of new DFN Service Dehydrator (cartridge type) and DFN Moisture Indicator, completely assembled and ready for use. A single cartridge is capable of drying ten average one-ton systems. Liquid line installation recommended. Ask your wholesaler for full details and literature.

McINTIRE CONNECTOR CO.

257 JEFFERSON ST.

NEWARK 5, N. J.



Lewin-Mathes Co. Making Refrigeration Tubing

Lewin-Mathes Co., St. Louis, a recent entrant into the refrigeration tubing field, displayed samples of both copper and brass tubing. A booklet handed out to visitors to the company's exhibit showed scenes from its plant in East St. Louis, Ill., where tubing is produced. Scenes showed steps in production, from refinery on through to finished product.

Features claimed for the tubing include: completely dehydrated and sealed; fully deoxidized and of uni-

form grain structure; free from scale; easy to flare and bend; tested under 200-300 psi pressure.

Crown Has New Series Of Commercial Cabinets

Crown Refrigerator Corp., Metuchen, N. J., introduced a complete new series of commercial refrigerators, including stainless steel reach-in refrigerators, both two and four door type, ranging in size from 16 to 43 cu. ft.; beverage coolers in both stainless steel and baked crinkle fin-

ish; freezers of 14 and 20 cu. ft. capacity; stainless steel dough retarder cabinets of 42 and 70 cu. ft.; stainless steel back-wall cases of 4, 6 and 8 ft. lengths; and full-view display cases, including a self-contained model of 4 ft. length and remote models 4, 5 and 6 ft. long.

Automatic Ice Cube Maker Promoted by York

A fully automatic, self contained ice cube maker was the center of attention in the York Corp. display. At the flick of a switch this new unit is capable of turning out 450 pounds (or 8500 cubes) of ice per day. Formed in metal tubes and released when these tubes are warmed slightly, these crystal clear cubes drop down into a storage bin at the rate of 10 pounds every 30 minutes. When the bin becomes full a thermostatic control is automatically set into operation to shut off the machine. The unit automatically resumes operation whenever the supply of cubes needs replenishing.

Lever-Action Latches Improve Jamison Doors

A new type of lever-action latch which opens even the heaviest door at the touch of a fingertip was the latest improvement featured on the line of cold storage doors displayed by Jamison Cold Storage Door Co.

Prest-O-Matic Carbonator Has No Moving Parts

The new Prest-O-Matic carbonator, now being produced by Bartelt Engineering Co., Rockford, Ill., has a capacity of 150 ounces of carbonated water per minute. The unit is said to be made of standard refrigerator parts, and repairable by any qualified refrigeration mechanic.

Operated by gas and water pressure only, the unit does not have to be installed in a refrigerated space, the manufacturer asserts.

Knockdown Design Features Torrington Fan Unit

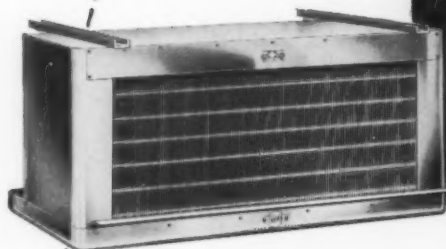
Torrington Mfg. Co. displayed its new "M" series attic fan featuring a knockdown type of construction

WORLD'S LARGEST REFRIGERATED WAREHOUSE

WILL BE **"RECORD"** EQUIPPED



**RECORD PRODUCTS WERE CHOSEN
BECAUSE THEY HAVE A DEPEND-
ABLE RECORD OF PERFORMANCE**



HERE'S THE FAMOUS
"RECORD" WATER
DEFROST COIL
SELECTED FOR THIS
OUTSTANDING
INSTALLATION.

Now under construction in Dallas, Texas, is Alford Refrigerated Warehouses, which, when completed will be the world's largest. "Record" famous water defrost low temperature coils have been selected to supply all of the low-side refrigeration. 285 of these units will be supplied for this job. Another proof that "Record" products are right.

"Record" equipment was a sensation at the All Industry Show. Write now for complete information.



**REFRIGERATION
ENGINEERING, INC.**

7250 East Slauson Ave., Los Angeles 22, Calif.

which permits this fan to be shipped in one-eighth the space occupied by the assembled unit. This design also provides for simplified assembly of the fan unit following shipment. A 4-blade unit, the "M" series fan is adaptable to belt drive only, and is available in sizes from 36 to 42 inches.

Ideal Offers Redesign of "Speed Freeze" Cabinet

A redesigned model of its 20-cu. ft. "Speed Freeze" frozen food cabinet was displayed by Ideal Cooler Corp. In this revised model, refrigeration coils are bonded to steel liner of chest. Three partitions divide storage space into four equal parts. Two insulated doors equipped with stop hinges and handles offer ready accessibility from the top of the unit.

New Hinges and Locks Key Grand Rapids Exhibit

A new lock (No. 4778) for small walk-in coolers, including those of the "personal" type, and a new flush

hinge (No. 15345) for reach-in refrigerators, topped the long line of hardware items on display in the booth of Grand Rapids Brass Co. Measuring only 9 inches overall, the new snap action, reversible walk-in lock sells for almost half the price of some of the larger models. The new hinge makes possible everything from flush mounting to 1 1/8-inch offset in 1/8-inch graduations.

Copeland Adds Models to Copelametic Series

Copeland Refrigeration Corp. introduced at the Show two additions to its Copelametic condensing unit line, in 1/2 and 3/4 hp heavy duty models.

The company also announced during the Show that it plans to produce units up to 7 1/2 hp in the Copelametic series, for heat pump applications.

Besides the new models, the company's display featured a stroboscopic unit which stopped compressor action and showed the oil circulation principle, and an operating system with glass evaporator.

Easy Servicing Claimed For "NAT" Conditioner

Ease of servicing is claimed as one of the leading features of the line of packaged air conditioners produced by the Nat Corp., Kansas City, Mo. Designed primarily for summer comfort cooling, the units can be equipped with heating coil for year-around service. Front panels of the unit are easily removed to allow access to fan, coil and compressor compartments. The three units (SC300, SC495 and SC600) have Btu output ratings shown as 40,000 53,500 and 64,500 Btu/hr, respectively.

Bottle Cooler Design Saves Back Bending

A series of spring elevators that raise the lower tier of bottles 14 inches up from the floor level to save back bending, yet lower gently to the bottom of the case when the cooler is filled, feature the "Bottoms Up" line of bottle coolers displayed by United Frigurator Engineers. Constructed of stainless steel, these units also feature the "Turbulator" quick cooling coil.

This forced draft cooling tower is as **QUIET** as your electric refrigerator

● Here is a highly efficient cooling tower that can be operated indoors or outdoors without noise. Binks Type B Forced Draft Cooling Towers are as quiet as a good domestic oil burner or electric refrigerator. This is accomplished by using a slow speed blower assembly in place of the usual high speed propeller type fans. The type B tower greatly increases the air to water ratio without increasing power consumption. The result is higher efficiency and less wear. Excellent for use with small and medium capacity water cooled refrigeration and air conditioning compressors. Also well suited to other water cooling jobs requiring a capacity up to 60 G.P.M. or 20 tons of refrigeration.



SEND NOW FOR BULLETIN 700

which supplies data, tables, charts, etc. to help you determine the right size Type B cooling tower for your use.

THERE'S A BINKS COOLING TOWER FOR EVERY WATER COOLING JOB

**BINKS
TYPE B**



**20
STANDARD SIZES**

Binks

MANUFACTURING COMPANY

3114-40 CARROLL AVE., CHICAGO 12, ILLINOIS

OFFICES IN ALL PRINCIPAL CITIES

SERVEL HOLDS FIRST POST-WAR CONVENTION

As a preview to the 5th All-Industry Show in Cleveland, Servel, Inc., held its first postwar sales convention in Evansville, Ind., on Jan. 23 and 24, with more than 125 fixture manufacturers and wholesale distributors who sell Servel equipment as guests.

The two-day program opened with a factory inspection tour through general production departments followed by a luncheon in the Servel cafeteria at which W. E. Baker, vice president in charge of production,

was the speaker. During the afternoon an inspection tour was conducted through the Servel machine shops, assembly, and engineering departments.

At a dinner meeting held that night in the Gold Room of Evansville's Hotel McCurdy, George S. Jones, Jr., vice president in charge of sales, was toastmaster, and the leading speaker was Louis Ruthenburg, Servel president.

The second day was spent in sales meetings which were addressed by other Servel executives.

WERNER NAMED SOUTHEAST RECOLD DISTRIBUTOR

Continuing its program of expansion of national distribution, Refrigeration Engineering, Inc., has completed negotiations with W. Les Werner to act as an exclusive "Recold" distributor in the southeastern section of the country.



Werner will operate under the name of Werner Refrigeration Products and will cover the states of North Carolina, South Carolina, Georgia, Alabama, and Florida.

For more than 15 years he has been actively engaged in the refrigeration field, having been connected with Kelvinator and Universal Cooks as a distributor supervisor and later as a district factory manager in Canada.

As a Recold distributor he will work closely with Sterling F. Smith who is direct factory representative for Recold covering the territory in which Werner will operate.

NATIONAL Refrigerator Hardware

complete sets in matching designs

A wide range of hardware designs for use on Household and Commercial Refrigerators, Reach-in Cabinets, Display Cases, Back Bars, Florists Boxes, Bottled Beverage Coolers, Draft Beer Equipment, Coin Operated Refrigerated Dispensing Machines, Milk Coolers, Low Temperature, horizontal or vertical Cabinets, Stokers, etc.

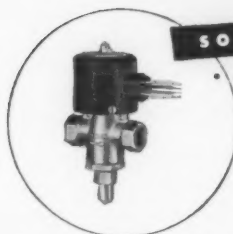
Consult your jobber for complete information and prices.



Pretty June Kosash serves Neill Mitchell, advertising manager of Lehigh Industries, Inc., a drink that "hits the spot" from the new beverage dispenser being produced by Globe Machine & Stamping Division of Hupp Corp., Cleveland, and shown for the first time in the Lehigh display at the All-Industry Show. (Lehigh supplies the condensing units). A cup-type dispenser, the machine is expected to sell for around \$450, considerably lower than most others now on the market. One of the initial orders is from the Pepsi-Cola Co., and Hupp officials assert they already have more than \$2 million worth of orders for the dispenser. Because of its relatively low cost, the unit is expected to be installed in many places (like offices and gas stations) where it is not economical to place a more expensive type of dispenser.

T

wenty-five years of close association with the refrigeration industry is reflected in the advanced design and proved construction of Henry Products...



SOLENOID VALVES

Capacity range 1 to 20 tons Freon and 10 tons Ammonia. Most models have come-apart construction. Metal-to-metal and soft neoprene valve seats. Freon valve connections: $\frac{3}{8}$ " to $\frac{1}{2}$ " solder and $\frac{3}{8}$ " to $\frac{1}{2}$ " F.P.T. Ammonia $\frac{3}{8}$ " and $\frac{1}{2}$ " F.P.T. flanged connections.



Sold by leading wholesalers

HENRY VALVE COMPANY

Control Devices, Valves, Driers, Strainers and Accessories for Refrigeration and Air Conditioning and Industrial Applications.

3260 W. Grand Ave., Chicago 51, Ill. • Cable: HEVALCO Chicago



DON'T BE HANDSHAKE SHY

USE

QUICKEE

WATERLESS Hand Cleaner...



after every job!



Why be ashamed of grimy hands? Let Quickee keep them handshake-clean. Clean up after every job with Quickee Waterless Hand Cleaner. Clean hands help make sales.

Quickee makes dirt disappear in 17 seconds flat. Removes grease, grime, paint, tar—without water. Contains skin conditioning Lanolin and vegetable oil... cannot harm skin because it contains *no grit, no sand, no harsh alkalis.*

EXTRA PROFITS

You can sell QUICKEE to your customers. Ask your wholesaler or write for free sample.

USE
QUICKEE
WATERLESS
HAND CLEANER
after every
job

in cans up to 35 lbs.
in tubes at 35¢

TUDOR CHEMICAL SPECIALTIES, INC., NEW YORK 53, N. Y.

The
UNSURPASSED
CONTROL for
Refrigerants

V-200-1/2



THERMOSTATIC
EXPANSION VALVE

Request new Catalog 200-1

REFRIGERATION
VALVES and STRAINERS

"6 VALVES IN 1"

GENERAL CONTROLS
801 ALLEN AVENUE
INDIANAPOLIS 4, INDE.
BRANCH OFFICES AND DISTRIBUTORS IN ALL PRINCIPAL CITIES

KELLIE, TRIX FORM AMINCO PRODUCTS

Formation of Aminco Refrigeration Products Co. to take over the refrigeration division of American Injector Co. has been announced by E. "Ed" Kellie and John L. Trix. Kellie is president of the new organ-



Mr. Kellie



Mr. Trix

ization while Trix serves as secretary-treasurer.

In effect, the refrigeration division of American Injector is now being operated by Aminco Refrigeration Products Co. Guarantees and warranties on the American Injector line of products will continue in force without interruption, officials of the new firm announce.

The new company has moved into

new quarters at 14544 Third Ave., Detroit 3, where it will maintain offices, manufacturing and shipping facilities, and conduct developmental work. Products manufactured will include the Aminco line of oil separators, high side floats, water valves, snap-action valves, constant-pressure valves, strainers, starting load regulating valves, loaded check valves, line check valves, flange adapters, and pressure and vacuum setting pumps. Additional items will be added to the line in the near future, it was announced.

Kellie, president of the new firm, has been associated with the refrigeration industry since 1919, and had been with American Injector Co. since 1935 when he took charge of engineering. In 1938 he became sales manager of the refrigeration division, and in 1941 was elected vice president.

Trix has also been associated with American Injector, starting in engineering in 1937. He became secretary of the company in 1941 and served also as assistant factory superintendent.

MAINE BRANCH OPENED BY JOSEPH SIMONS CO.

A branch store in Portland, Me., designed to service the entire state of Maine as well as adjoining New Hampshire, has been opened by the Joseph Simons Co., refrigeration supplies wholesaler of Hartford, Conn.

This Maine store will carry a complete line of refrigeration equipment, and will feature a 5-minute service for evacuating and refilling refrigerant cylinders. Larry Clark, formerly with Gerry & Colburn in Portland, will be in charge of this new outlet. Vern Littlefield will continue to call on the trade as he has in the past.

ALTER ISSUES "BIGGEST" BOOK

Harry Alter Co., Chicago refrigeration equipment and supplies wholesaler, has announced the issuance of the biggest catalog in its history. The Spring edition of the semi-annual Alter offering is known as Dependabook No. 146, and contains a variety of new lines including Kenmore high-sides, Utica pliers, Simoniz, taps and drills, and others. A copy of this catalog may be obtained by writing on your letterhead to Harry Alter Co., 1728 S. Michigan Ave., Chicago.



in BEN-HUR Farm and Home Freezers

A COMPLETE LINE to suit ALL Home Needs — Farm and City. FOUR MODELS — 6, 9, 12.5 and 18 cubic foot sizes.

EXTRA VALUE in precision-engineered features that assure improved food protection, longer service.

POWERFUL NATIONAL ADVERTISING — Over 6 million readers mean a big prospect list, easier selling.

NATION-WIDE REPUTATION — Thousands of owners are your best boosters for BEN-HUR Freezers.

COMPLETE SELLING MATERIAL — Sales Manuals, Colorful Display Materials, New Direct Mail and Counter Folders — all come to you regularly.

FREE NEWSPAPER AD MATS — Fit all occasions, all seasons, for effective local tie-in.

Check Them All . . . and you'll
choose the BEN-HUR Line

Some Choice Territories Still Open . . . Write

BEN-HUR MFG. CO., Dept. R 634 E. Keefe Ave. MILWAUKEE 12, WISCONSIN

BEN-HUR

FARM and HOME FREEZERS

HEALTHFUL LIVING THROUGH FROZEN FOODS

COMMERCIAL *Refrigerator* SALES NEWS

While *The Refrigeration Industry* is not the official publication of the National Commercial Refrigerator Sales Assn., the Editors assign this space each month to the association. The information below is furnished, for the most part, by the offices of the association and its local affiliates.

Bader, Shell, Sherman Named to Head NCRSA

Election of officers and directors for what well may be a crucial year in its development topped the activities of the National Commercial Refrigerator Sales Association when it held its first annual business meeting and banquet at Cleveland's Hotel Carter during the week of the All-Industry Show.

Named to head the organization as its president for the coming year was W. C. Bader, of Bader Supply Co., Tulsa, Okla. Assisting Bader in the direction of the group will be Irving W. Shell of Lee-Shell Co., Chicago, as vice president, and Charles Q. Sherman of Refrigerated Equipment Sales, New York City, as secretary-treasurer.

Reelected as directors for one-year terms were: H. B. Adams (Tyler), Tampa, Fla.; J. D. Edmondson (McCray), Raleigh, N. C.; George B. Herman (Hussman), Minneapolis, Minn.; Harry Hattenbach (Hill), Cleveland; Z. O. Jennings (McCray), Little Rock, Ark.; and Cliff White (Viking), Cincinnati, Ohio.

New directors, elected for a term of two years, include: George Lipack (Super Cold), New York City; Russell Maintain (Hill), Boston; E. E. Wilson (McCray), Portland, Ore.; A. E. Willey (Hussman), Philadelphia; I. Rosenberg, Jr. (Weber), Pittsburgh; and R. D. Thrush (Friedrich), Charleston, W. Va.

Speakers at the association's banquet included: E. M. Stultz, president; Viking Refrigerator Co.; George B. Herman, retiring NCRSA president; and A. J. Edmundson, retiring secretary. R. H. Muehlberg, Jr., executive secretary of the organization, served as toastmaster.

In a welcoming address on behalf of the mayor of Cleveland, John P.

Butler, the mayor's executive assistant, cited the progress of the organization in boosting its membership from approximately 35 to 350 members during the short space of its existence, and commended the members on the spirit of mutual assistance and cooperation which had led them to organize the association. "Crazy people," he sagely concluded, "never get together."

George Herman, in his presidential swan song, stressed over and over again the importance of the refrigeration business to the national welfare as a vital factor in the operation of the nation's food industry, and urged each member of the association to do everything within his power to foster the growth and development of the commercial refrigeration merchandis-



George B. Herman (right), retiring president of NCRSA, offers his congratulations and best wishes to his successor, W. C. Bader, of Tulsa, Okla., after the election.

ing business. In conclusion, he uttered a plea for the cooperation of all other industry groups in promoting the aims for which the NCRSA stands.



C. L. Ames (left) and H. S. Boehmer (right) of C. V. Hill & Co., Inc., Trenton, N. J., express the manufacturer's viewpoint as they chat with G. J. Bellish, Mandrake Refrigeration & Equipment Co., Cleveland, between sessions of the NCRSA meetings.

Dealer's Choice!



These are the men who will guide the destiny of the National Commercial Refrigerator Sales Association for the coming year. New officers of the group, elected during its meeting held in conjunction with the All-Industry Show, are (left to right): Irving W. Shell, Lee-Shell Co., Chicago, vice president; W. C. Bader, Bader Supply Co., Tulsa, Okla., president; and Charles Q. Sherman, Refrigerated Equipment Sales, New York City, secretary-treasurer.



Diagnosis!

YOUR SERVICE MAN must be equipped to diagnose refrigeration troubles quickly and expertly.

Like the skilled physician he needs the finest and most modern instruments to analyze symptoms and prescribe treatment.

The ASHCROFT Refrigeration Test Gauge is an indispensable tool in the testing and servicing of mechanical refrigerators. With multiple temperature equivalent scales in different colors for Freon 12, Sulphur Dioxide, and Methyl Chloride, it is the most versatile tool in the serviceman's kit—adaptable to all systems.

ASHCROFT'S unmatched research, engineering and manufacturing facilities assure advanced design, permanent accuracy and finest quality always.

Specify ASHCROFT and be sure.

Stocked and sold by leading Distributors everywhere... When you order gauges, insist on ASHCROFT... Write for booklet.



ASHCROFT
A Product of *Gauges*

MANNING, MAXWELL & MOORE, INC.
BRIDGEPORT 2, CONNECTICUT

Makers of Ashcroft Gauges, Hancock Valves, Consolidated Safety and Relief Valves and 'American' Industrial Instruments.

ABOUT PEOPLE...

Continued from page 47

and developed its nationwide sales organization. It was at his insistence that the company set up its elaborate research and production testing facilities.

Ralph B. Ley has been appointed district factory representative for Schaefer, Inc. in the southeast territory. He will handle Schaefer sales in Alabama, Florida, Georgia, North Carolina, South Carolina, and Tennessee, as well as parts of Virginia, Kentucky, and Mississippi. From the end of the war until the beginning of 1947, Mr. Ley was in charge of OPA pricing for all commercial refrigeration equipment. During the past year he served as factory representative



for Victor Products Corp., with headquarters in Chicago.

T. G. (Ted) Thomas has been appointed sales manager of the refrigeration equipment division of Schnacke, Inc. He replaces Eddy Miller, who has resigned to go into his own business. Mr. Thomas had been with the company previously as division manager and has had considerable experience in refrigeration sales and engineering as head of his own business in Texas.

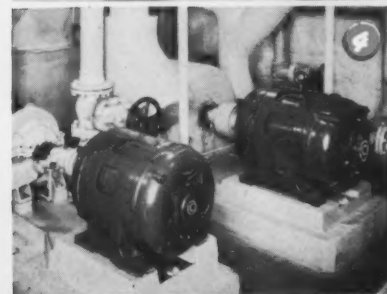
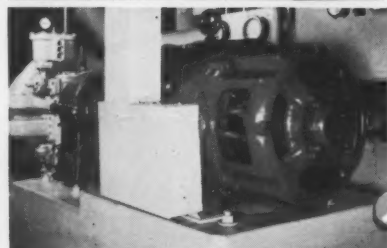


George E. Simons has been appointed advertising manager for General Electric major appliances. Simons was formerly manager of advertising and sales promotion and employee and community relations for the General Electric air conditioning department in Bloomfield, N. J.



The RIGHT *Century* MOTOR for Every Air Conditioning Application Contributes to Continuous Long-Life Performance and Economical Operation

The air conditioning system to cool this entire building is powered by Century Electric motors.



Here's an interesting example showing how the engineered selection of Century motors accurately meets the exacting demands of large air conditioning installations. The wide range of types and sizes of Century motors permits selection of the right motor for any heating, cooling, circulating, pumping or compressor application.

1 and 2—Two Century type SR Slip Ring motors (125 and 200 horsepower) were selected to drive the high speed compressors because they have the necessary high torque to bring these centrifugal compressors up to full speed quickly. Speeds up to 9,000 RPM are supplied by using a speed increasing gear mechanism.

3—Century type SC 25 horsepower Squirrel Cage Normal Torque motor drives a centrifugal pump.

4—Century type SC 50 horsepower Squirrel Cage Normal Torque motor drives a chilled water pump—and a similar 20 horsepower motor drives a condenser water pump.

These Century pump motors easily handle the centrifugal pumps, since they require a small amount of starting torque.

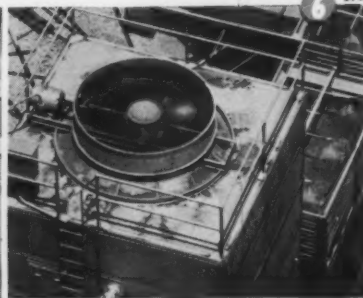
5—Century 1½ and 3 horsepower type SC motors drive fan and coil units.

6—Century Splash Proof motor provides weather protection for this outdoor installation on a cooling tower fan.

Century builds a wide range of motor types in sizes from 1/6 to 400 horsepower to assure top performance for every electric power application.

Specify Century for all your electric power requirements.

CENTURY ELECTRIC CO. • 1806 Pine Street • St. Louis 3, Missouri
Offices and Stock Points in Principal Cities



YOU'LL FIND
Eston
REFRIGERANTS
ARE BETTER!



Distributors of
FREON II-12-22-II3

Years of use in all types of refrigeration equipment have proven Eston refrigerants are superior. All are of sustained high quality with exceptionally low moisture content. Servicemen say Eston refrigerants give better performance and more efficient operation. Eston jobbers are conveniently located. Write for complete information.

*In the West it's
Eston for Refrigerants*

Eston
CHEMICALS, Inc.
3100 East 26th Street
Los Angeles 23, Calif.

Useful LITERATURE

The publications listed below are available to readers without charge. Simply list on the postcard provided in this issue the numbers of the items you wish to receive, and send it to **THE REFRIGERATION INDUSTRY**, 1240 Ontario Street, Cleveland 13, Ohio. Your requests will then be forwarded directly to the companies concerned.

248—Refrigeration Accessories . . .

A 16-page catalog (No. 481) describing, illustrating, and listing prices of the "Wabash" line of refrigeration accessories, such as oil separators, dryers, strainers, accumulators, capillary tubes, charging hose, high side floats, and couplers. Available from Wabash Mfg. Co.

249—Cold Storage Units . . .

The 1948 "Polar" line of cold storage doors, home and farm freezers, and "packaged" walk-in coolers and locker plants is described and illustrated in this 20-page catalog (No. 48). Specifications are listed and construction features are itemized. Available from Refrigeration Engineering Co.

250—Soldering Iron . . .

Four key features of the new Lenk electric soldering iron are outlined on a broadside which illustrates the iron and also lists model numbers, wattage requirements, and prices. Available from Lenk Mfg. Co.

251—Lubrication . . .

A thorough discussion of various types of commercial food freezers and the lubrication problems which they involve is contained in this article entitled "Lubrication of Food Preservation Machinery (By Freezing and Dehydration)" which is reprinted from the monthly technical bulletin of The Texas Co.

252—Replacement Hardware . . .

How to sell and install replacement hardware for commercial refrigeration equipment is detailed in this 4-page "service manual" which is illustrated both with photographs and diagrams. Specifications of various items are listed and a table of offsets is provided. Available from Grand Rapids Brass Co.

253—Defrost System . . .

A 4-page bulletin (TAD-48) on the new Tenney hot gas defrost system utilizing the "Defrostolator." A two-color functional diagram of the system which includes both the refrigeration and defrost cycles is featured. Operating instructions, dimensions, and prices also are provided. Available from Tenney Engineering, Inc.

254—Floor Coatings . . .

Actual color samples of various floor coatings designed for commercial and industrial applications are included on this promotion piece published by Wilbur & Williams Co. Features of these coatings for concrete, wood, or metal floors are listed, and application costs are indicated.

255—Ice Cream Vendors . . .

A 4-page, 3-color brochure illustrating and de-

scribing two models of automatic ice cream vending machines. Cutaway illustrations show all mechanical parts. Specifications are listed. Available from Revco, Inc.

256—Tube Cleaners . . . The complete line of "Rotojet" tube cleaners is described and illustrated in a 4-page folder issued by Roto Div., Elliott Co. Types and sizes of Rotojet motors for operation with water, steam, and compressed air also are shown.

257—Refrigerator Hardware . . .

Catalog 10 issued by Arcade Mfg. Division, listing specifications of its line of refrigerator hardware for low temperature cabinets, and showing a variety of hinges, levers and handles, cold storage track door operator, bumper bar, cooler locks, etc.



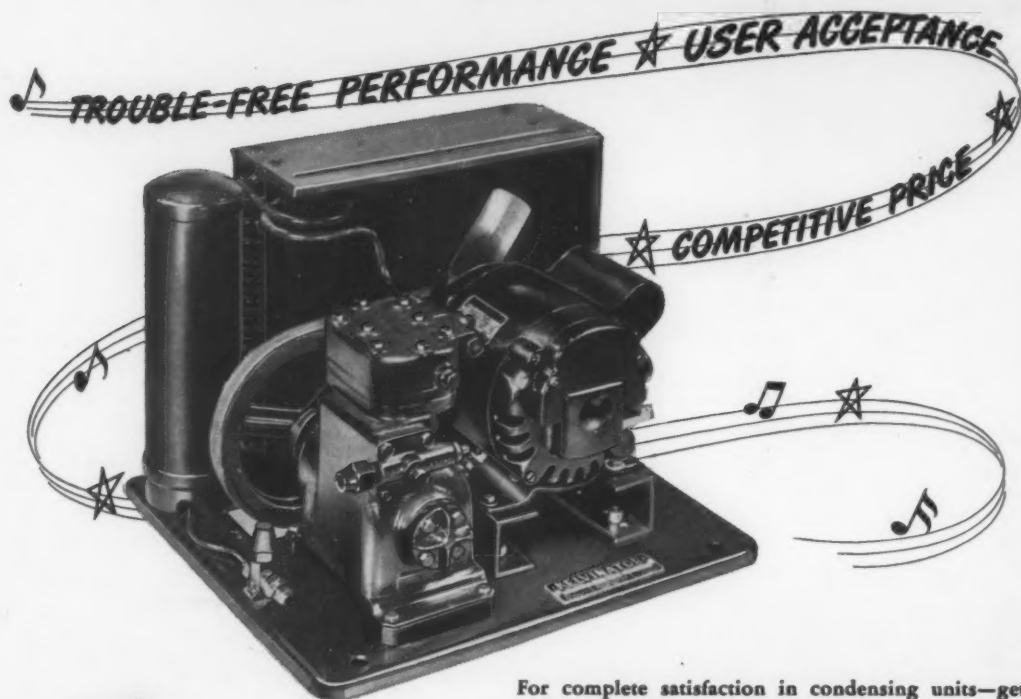
THE LIQUID EYE

- Eliminates Pressure Drop . . .
- Light, sturdy construction . . .
- Positive reaction of indicator . . .
- Pyrex tubing insures safety . . .
- Proven under actual field conditions . . .
- Pliable gaskets are impervious to Methyl Chloride, Freon-12, Sulphur Dioxide and Refrigerant Oils . . .

Order this LIQUID EYE from your jobber now

ALLIN MFG. CO.
1153 West Grand Ave.
CHICAGO 22, ILLINOIS

Get **Kelvinator** and you get all three!



GET YOUR COPY!

Kelvinator's "Trouble-Shooter's Guide" for Refrigeration Service Men . . . a handy pocket-sized booklet for training additional personnel. Ask your local Kelvinator Distributor or Zone Office about it.

For complete satisfaction in condensing units—get Kelvinator! They're *fully dependable in service . . . priced to meet competition . . . and backed by a name that customers know means quality!*

From rigid tests during production . . . right down to actual operations under all conditions . . . Kelvinator condensing units perform *dependably*. And their dependability is known and respected by refrigeration men the country over—just as the name Kelvinator itself means the finest modern design, engineering, and quality manufacture. It's a name that always *sells . . . always satisfies!*

Call at one of Kelvinator's 50 convenient supply depots for your refrigeration needs. Each depot carries a complete stock of Kelvinator-made parts and supplies, *competitively priced*. You'll always find fast, friendly service at Kelvinator . . . Kelvinator, Division of Nash-Kelvinator Corporation, Detroit, Michigan.

Kelvinator



CONDENSING UNITS OPEN AND SEALED



Boost Your Compressor Oil Business

Texaco Capella Oil's 7 advantages increase sales and profits

EVERY service engineer knows the importance of using the *right* lubricants *right* to assure efficient, trouble-free compressor operation. And experience with all types and sizes of compressors has shown that *Texaco Capella Oils* give the outstanding performance that builds profitable business.

Here are *Texaco Capella Oil's* 7 advantages: 1) high stability; 2) freedom from moisture; 3) non-reaction with refrigerants; 4) resistance to gumming and sludging; 5) very low pour tests; 6) complete viscosity range; 7) re-sealable 1-qt., 1-gal. and 5-gal. containers.

These advantages are the reasons why *Texaco Capella Oils* are fully approved by leading makers of refrigerating and air conditioning compressors . . . why they are preferred everywhere by service engineers, dealers and distributors alike.

Boost your business with *Texaco Capella Oils*. The Texas Company, 135 East 42nd Street, New York 17, New York.



TEXACO Capella Oils

FOR ALL AIR CONDITIONING AND REFRIGERATING EQUIPMENT



TUNE IN . . . TEXACO STAR THEATRE presents the TONY MARTIN SHOW every Wednesday night. • METROPOLITAN OPERA broadcasts every Saturday afternoon.

"Butcher Boy" COLD STORAGE DOORS

Exclusive Features

- ★ 100% DOUGLAS FIR DOORS
- ★ CONTROLLED QUALITY
- ★ OUTSTANDING APPEARANCE
- ★ LOWEST PRICES IN THE INDUSTRY

**STANDARD
FREEZER
DOOR**
with
STANDARD
HARDWARE



**SUPER-
FREEZER
(OVERLAP)
DOOR**
with
SUPER-SEAL
FASTENERS
and
FINGER-TIP
DOOR
OPENERS
(EXTRA)

**TRACK
DOOR**
with
STANDARD
HARDWARE



BUTCHER BOY
COLD STORAGE DOOR CO.
170 N. SANGAMON ST., CHICAGO, U.S.A.

Mail Today

PLEASE RUSH BULLETINS
ON COLD STORAGE DOORS

NAME _____

ADDRESS _____

CITY _____

STATE _____

MARCH, 1948

THE PRACTICAL Refrigeration Engineering MANUAL ... by Harold Smith

XXII. Food Freezing and Storage For Farm and Home

PART II

IN MANY instances, dissatisfied and disappointed customers result from the purchase of equipment entirely too small and inadequate for their requirements. The refrigeration engineer can perform a real service to his customers by helping to estimate adequate requirements to handle all the foods to be frozen or stored.

COUNSEL YOUR CUSTOMERS

This activity is particularly important when you are dealing with the farmer or individual who plans to process, freeze and store his entire requirements. If the low temperature equipment is to be used only for storage or as a service cooler, the problem is greatly simplified.

There are far too many instances where the customer fills his cabinet to full capacity with the first crop or meat carcass processed and frozen, and consequently has no available space or capacity for further freezing or storage until (weeks or months later) enough of the first food placed in the cooler has been consumed to provide additional space.

AMPLE CAPACITY A MUST

If, in the meantime, additional food products ripen or become available for freezing and storage the customer is entirely without additional facilities for handling this new crop and must either process it by some other method or use what he can immediately,

disposing of the balance before it spoils.

It is readily seen that the first time this situation arises the customer becomes dissatisfied, realizing he has purchased equipment too small to take care of all his food.

CITY USES DIFFER

Frequently with customers, particularly those living in the cities, the low temperature food equipment is purchased only for storage and service purposes.

In such cases arrangements are made with a commercial freezer and processor, often times a locker storage operator, to age, process and freeze the foods, placing the frozen food in a storage locker at the locker storage plant to be later transferred to the owner's storage cabinet at home.

An arrangement of this kind provides considerable flexibility and means for expansion and in most instances works out very satisfactorily for the customer.

PROBE PROSPECT'S NEEDS

In other instances, city people confine their frozen food purchases entirely to packaged products, processed by large commercial processors and delivered each week to their homes. Again the estimating of requirements is relative simple when this method of supply is followed.

It is therefore easy to understand the necessity of investigating carefully the family requirements before selling fast freezing cabinet equipment.

Most manufacturers of frozen food cabinets show the cubic foot

NEMA OFFICERS NAMED

William C. Johnson, vice president in charge of the general machinery division of Allis-Chalmers Mfg. Co., is the new president of the National Electrical Manufacturers Association, succeeding R. Stafford Edwards.

Other new NEMA officers named are: B. W. Clark, Westinghouse Electric Corp., vice president; Whipple Jacobs, Belden Mfg. Co., vice president; and E. E. Potter, General Electric Co., treasurer. Three new board members include: J. H. Ashbaugh,

Westinghouse; D. F. G. Eliot, Western Electric Co., Inc.; and J. J. Nance, Hotpoint, Inc.

McCALL WORKERS GET 8c RAISE

Union employees of McCall Refrigerator Corp., Hudson, N. Y., have accepted an 8-cent hourly pay raise to end a recent strike lasting four weeks. The settlement was reached between McCall officials and representatives of the United Electrical Workers.

capacity and approximately the number of pounds of food that can be stored in a cabinet at one time.

We have prepared a form sheet

below which can be used to work out these capacity figures to closely approximate the total cabinet requirements needed to properly serve each customer.

ESTIMATE SHEET FOR FROZEN FOOD CABINET REQUIREMENTS

Customer: _____ Street: _____ Date: _____ 19____
City: _____ Zone _____ State _____
No. People in Family _____

Estimate No. Other People Served per Week _____

| Items to Be Stored | Total Pounds | Date to Be Stored | Estimated Total Usage per Week | Date Used Up |
|--------------------|--------------|-------------------|--------------------------------|--------------|
| Beef | | | | |
| Fresh Pork | | | | |
| Lamb | | | | |
| Chickens | | | | |
| Turkey | | | | |
| Ducks | | | | |
| Other Meats | | | | |
| Peas | | | | |
| Corn | | | | |
| Beans | | | | |
| Spinach | | | | |
| Asparagus | | | | |
| Other Vegetables | | | | |
| Cherries | | | | |
| Pears | | | | |
| Peaches | | | | |
| Plums | | | | |
| Other Fruit | | | | |
| Strawberries | | | | |
| Blackberries | | | | |
| Raspberries | | | | |
| Other Berries | | | | |
| Other Products | | | | |

To illustrate the way to use this table, we give below a simple example.

Product: Beef.

Avg. consumption per person per year: 104 lbs.

Avg. consumption per person per week: 2 lbs.

No. people in family: 4.

Avg. consumption for family per week: 8 lbs.

416 lbs of beef would be consumed per year at an average rate of 8 lbs. per week (8 x 52) provided no persons outside the immediate family were served. If during the year 16 outside people were served $\frac{1}{2}$ lb. per person (a total of 8 lbs.) the 416 lbs. would be consumed in 51 weeks. With a little analysis and study of food usage this estimate sheet can become both valuable and reliable. Engineers estimating frozen food cabinet requirements for their customers will be in a position to closely estimate the proper cabinet size to do the job planned for it by the customer.

(Part III of this section will appear in next month's issue.)



Senator H. F. Byrd Stores 425,000 Bushels of Apples with



Refrigeration and Air Conditioning

Harry Flood Byrd, former Governor of Virginia, who is doing such a tremendous work for national economy in the U. S. Senate, is also the largest individual apple grower in the world.



The Berryville Plant is 192 Ft. Long, Charles Town, 400.



Apples are Cleaned, Graded and Packed with This Equipment.



One End of Air Conditioned Storage, Charles Town.



Frick Cooling Coils in Air Stream of Cold Storage.



Two Frick Refrigerating Machines at the Byrd Apple Storage, Charles Town.



THE REFRIGERATION INDUSTRY



the important thing to know about
refrigeration tube is

IT'S REVERE!

● Whenever you buy refrigeration tube, look for the name Revere. That's the way to be sure of fine quality—month in and month out—on every length you buy.

Revere offers you Dryseal COPPER Refrigeration Tube and 3S-O ALUMINUM Refrigeration Tube. Both are dead soft so that you can bend them readily by hand. You can flare them easily for compression fittings, and they will not split on the ends.

You can depend on Revere Refrigeration Tubes to be bone dry, too. Each length is carefully dehydrated and tightly sealed; so you needn't worry about "stuck" expansion valves due to tube moisture. Exterior and interior surfaces are clean, bright, smooth, and free from slivers, seams, grooves, cracks and other injurious defects.

Revere Dryseal Copper and Revere Aluminum Refrigeration Tubes come in sizes from $\frac{1}{8}$ " to $\frac{3}{4}$ " O.D., with .035" wall, and are standard in 50-foot coils. You can get prompt delivery from leading distributors throughout the country.

Remember . . . be sure to ask for REVERE!

REVERE

COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801

230 Park Avenue, New York 17, New York

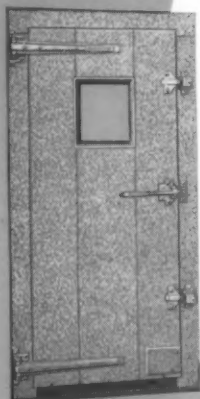
Mills: Baltimore, Md.; Chicago, Ill.; Detroit, Mich.; New Bedford, Mass.; Rome, N. Y.—Sales Offices in Principal Cities, Distributors Everywhere.



JAMISON SUPER FREEZER DOOR



JAMISON "DIXIE" CAN
PASSING VESTIBULE



JAMISON LO-TEMP DOOR



JAMISON VERTICAL SLIDING DOOR

FIRST WITH MEN WHO KNOW COLD STORAGE DOORS

To know cold storage doors is to know Jamison.

There is a background of more than fifty years of continuous specialization in the design and construction of Jamison cold storage doors. This experience building doors for every use is fully reflected in the extent of the Jamison line today.

It is Jamison's know-how that has pioneered every development and improvement in both cold storage doors and hardware. Both are produced from start to finish in our modernly equipped plant with an eye to quality construction throughout; high efficiency in operation; and long service life.

Jamison cold storage doors are built in a wide range of types and sizes to meet all standard requirements. If you have an unusual cold storage door problem, we are equipped to build doors regardless of size, character or duty—to your specifications.

Write for our catalog or get in touch with our nearest branch—we are represented from coast to coast. You will be surprised how frequently a standard Jamison product will meet your requirements. Jamison Cold Storage Door Co., Hagerstown, Md.

JAMISON STANDARD DOORS

JAMISON, STEVENSON, VICTOR
NOEQUAL, LO-TEMP.



The Oldest and Largest Builder of Cold Storage Doors in the World



Over the COUNTER

Are You Set for a "Selling Year?"

THIS year of 1948 can—and should—be your best year, so far, in selling packaged commercial refrigeration and air conditioning equipment.

The market is there, ready to be sold. It's a market of business men, who will purchase this equipment just as soon as you sell them on the fact that it is a sound, worthwhile business investment.

You know your product, and what it will do. More than likely, there are several business men and places that have been users of your product for some years; so their backing, if you call for it, will be most useful in buttoning-down those prospects that you develop.

You're supplied with sales material, designed to back up your efforts in selling the soundness of your various types of equipment as a business investment.

There you are, with the market, the products, the sales materials—but that's not all you'll need if you're to make 1948 a real "selling year" for you. There's one other ingredient—and it's one that only you, yourself, can supply.

That missing ingredient, without which all of the others isn't going to be of much help to you, is a real, alert, aggressive sales organization. It needn't be a big organization, but it's got to be one that's "on the ball."

Now, while there's still time for you to do it, why not take stock of the sales plans you've made for 1948, and see whether or not you're really "set" for a "selling year"? For instance:

Do your salesmen have competent, aggressive supervision? Are their sales efforts being directed into the most worthwhile channels, or are they just using hit-or-miss methods?

You're doing wrong by both yourself and your salesmen if you're not giving them the sales guidance and assistance of capable supervision.

Do you have enough salesmen to really cover your sales territory? Does each of your salesmen have his own special territory to develop and sell?

It's most important to have a definite plan of sales action for, your whole territory. If you're getting only spotty coverage, you can expect

sales to be spotty, too. It will prove costly to you, and even more costly to each one of your salesmen.

Are you holding regular sales meetings, to teach your salesmen how to use your sales tools most effectively?

If you are holding sales meetings, are they, too, just hit-or-miss affairs, or are they really sales "schools" that are worth the time they take up?

Use your sales meetings—if you're not doing so now—to discuss how certain sales were closed, and how others were lost. There's no better method of developing a real unity in your sales force than through this method. Learning of successful sales methods helps make salesmen more efficient; but even more important, learning why a sale was lost helps prevent salesmen from making the same mistake twice.

All these things are important—and until you can answer "yes" to them (and be honest about it) you'll not be set to make 1948 the "selling year" it can be for you.

**BUY FROM YOUR
REFRIGERATION WHOLESALER**

REWA members offer you

1. Sound, helpful engineering advice on products.

2. Local warehouse facilities with ample stocks to serve the trade.

3. Intelligent, competent sales representation, plus economy in handling credits, adjustments, etc.

4. Catalogs, advertising, and other promotional activities directed toward keeping the trade informed as to new products, changes in design, prices, etc.

5. Progressive, business-like distribution contributing toward the stability of the industry.

6. Sound operating policies based upon ethical trade practices.

1 Your REWA wholesaler is in business to help you. Out of his years of experience in the refrigeration field, he is equipped to give you sound, helpful engineering advice on products that will best fit any particular installation. Consult him often; you'll find his suggestions can save you time—and profits.

180 MEMBERS
MAINTAINING
OVER 300
CONVENIENT
OUTLETS

BUY FROM A



MEMBER

OPPORTUNITIES

Classified Advertising Section

FOR SALE

"EXCELSIOR BEER PUMPS—made since 1933, are again available in 2 sizes: ¼ HP and ½ HHP. Attractive prices for Dealers." Excelsior Machine Co., 2601 Kutztown Road, Reading, Pa.

Quality bobtail fountains; reach-ins, walk-in boxes—wood, metal; dough retarders; double duty cases—stainless steel, porcelain; dairy, florist, bakery cases; ice cream hardening cabinets; thermopane frozen food cases; milk, sandwich coolers; stainless steel back bars; with machines. Equipment made to special order. Frigitemp Corp., 931 Bergen St., Brooklyn 16, N. Y. MA 2-9093.

FOR SALE—Air-cooled and Water-cooled, remanufactured condensing units, ¼ up to 2 HP. Write for particulars, Edison Cooling Corp., 310 East 149 St., Bronx 51, N. Y.

FOR SALE: 12-16-19-22 and 26 cubic foot freezer cabinet. Write for list and prices. Rathbun Refrigeration Company, 325 Scribner Ave., N. W., Grand Rapids, Michigan.

FOR SALE—Central Missouri—Refrigeration Service and Appliance Store. Known franchisees, both in household appliances and commercial refrigeration. On main street; 12,000 population; file of over 2,000 regular service customers. Will sell appliance business separate \$5,000 or include refrigeration inventory, shop, for \$9,850.00. Leaving state. Box 3248, Refrigeration Industry.

FOR SALE

New and Rebuilt Roots Connersville and Sutorbilt Blowers for Ice Plant Agitation. Large Stock—Prompt Shipment. Wm. W. Meyer & Sons, 5032 Elm Street, Skokie, Illinois. Chicago Phone Ambassador 2727.

SEALED CROSELEY TERMINALS. Installed from the outside in a few minutes without opening the compressor or removing unit. No special tools required. Corrects leaky terminals on F-12 units. Short Model 1020—for short Croseley terminals (F-12 compressors with 4 mounting legs). Long Model 1020—for long Croseley terminals (F-12 compressors with 3 mounting legs). \$5.25 set of three. Immediate delivery. Money-back guarantee. **SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.**

Sealed units for sale. ¼ H.P. (F12) Complete with condenser, fan, relay, and shut off valves. \$45.00 each. Lots of ten, \$40.00. Technical Refrigeration Specialist's, 362 East 180th Street, Bronx, N. Y.

AVAILABLE—TEST MODELS of our starting and testing devices for stuck sealed units.

Offered to competent servicemen at approximately cost for additional field service reports.

REFRIGERATION LABORATORIES
1518 Cumberland Ave.
Waco, Texas

POSITION WANTED

Service Manager, now employed in Refrigeration and Air Conditioning desires position with aggressive firm in south. Will give particulars in reply. Box 3448.

Position Wanted—Refrigeration, Heating, and Air Conditioning Technician with some experience in designing, would like position with a consulting engineer or contractor. Veteran 26, Married. Box 3548, Refrigeration Industry.

TRAINING COURSES

THE DETROIT AIR CONDITIONING INSTITUTE of 4125 Grand River Avenue, Detroit 8, Michigan, offers a concentrated course covering thermodynamics, refrigeration, heating and air conditioning. Classes start February 3 and March 30. CI approved. Write to George H. Clark, director.

REPAIR SERVICE

Refrigeration Controls and Valves Repaired. Complete service for all makes and types. Also Stoker and Oil-Burner controls repaired. All work guaranteed. Write for prices or just mail in controls. Acme Control Service, 5521 Lawrence Avenue, Chicago 30, Ill.

Rebuilding and Exchange Service on open style compressors—all sizes, Condensers, Float Valves, Water Valves, Blower, Gravity and Ice Maker Coils. Ninety day Unconditional Guarantee. Write us on your company letterhead for our illustrated, priced catalog. Refrigeration Maintenance Corp., 321 E. Grand Ave., Chicago, Ill.

HELP WANTED

Service Manager—For aggressive sales and service company located in Northern Ohio. Service Department personnel consists of 20 people. This is a permanent position with unlimited possibilities. Requires a manager well qualified to supply mechanical information and organize office and service procedures. State previous experience, when personal interview may be arranged in first letter. Unless you can qualify for a \$7,000 to \$8,000 position, please do not reply. Box 3148, The Refrigeration Industry.

EXPERIENCED Refrigeration service man with fair knowledge of engineering wanted for locker plant work in mid-western state. Should have some knowledge of ammonia equipment. Salary, \$400 per month plus commission on parts and material. Housing available for man who gets job. Box 3348, Refrigeration Industry.

STEEL FIRM INSTALLS CRANE CAB COOLERS

American Steel & Wire Co., Cleveland, is installing two Dravo crane cab coolers on crane cabs operating over annealing furnaces at the firm's Cuyahoga works. Crane cab coolers, developed by Dravo Corp., Pittsburgh, establish comfortable working conditions for crane operators by controlling temperatures in the cab and filtering fumes and gases from air entering the cab.

MAGIC IN A SMALL BOTTLE

FREEZE-UPS ELIMINATED RIGHT AWAY!





ICE-X quickly cures emergency freeze ups when ice forms at the expansion valve or capillary tube. Harmless to use. Great for Freon, Carrene, or Methyl Chloride systems . . . The dependable liquid anti-freeze.

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JOBBERS: WRITE FOR SPECIAL PROPOSITION!

Rebuilding the Coldspot Unit

By A. G. Bate

9. COMPLAINTS

AMONG the most common complaints received in connection with defective Coldspot units are the presence of excessive noise and the fact that persons receive an electric shock when touching the refrigerator while at the same time being in contact with a radiator, sink, lamp, or another appliance which serves as a ground.

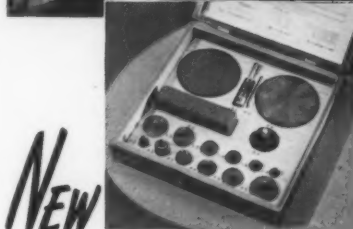
Excessive noise generally is caused by the presence of badly worn drive couplings, defective motor bearings, or a loose driver on the motor.

The condition of electric shock is caused by a leaky capacitor, which permits the line current to leak into the frame of the motor and then in turn to all metal parts of the unit. Removing the defective capacitor and replacing it with a new one which is properly insulated will remedy this trouble.

If the capacitor is "open," it will cause the motor to hum slightly and to refuse to turn over. If a quick spin is given to the motor by using the fan, however, the unit will continue to run with the faulty capacitor still in place.

A simple test for capacitors is to hook up a 200-watt, 110-volt light bulb in series with the capacitor and a 110-volt line. If the capacitor is "open," the bulb will not light up at all, or may possibly glow dully. If the capacitor is OK, the light will burn with about three-quarters of its normal illumination. If the capacitor is shorted, the bulb will burn at full brilliance.

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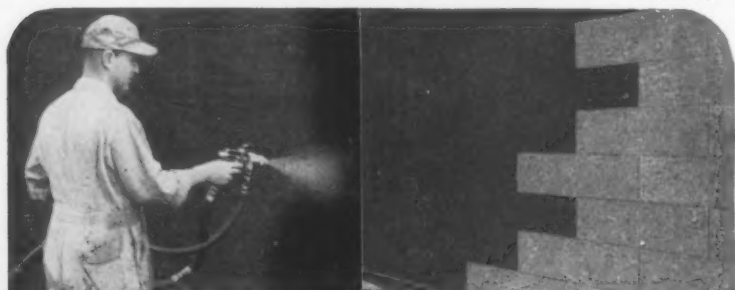
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Contains self-aligning tool holder . . .
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iron lapping disks . . . two 3" cast iron
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valve tester. Complete instructions en-
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Spray Laykold Adhesive on the wall—let set—apply vapor-seal membrane. Spray the overlaps, press down tight by hand or small roller. Goes on smooth, no lumps, no air pockets, TIGHT ADHESION. Spray over the membrane, spray the insulation blocks and install—much easier, FASTER. No fire hazard—no fumes—adheres to damp or dry surfaces—self-heals nails, skewers, cracks, etc.—stays ALIVE.

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- ★ Dependability
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Ranco Inc.

World's Largest Manufacturers of REFRIGERATION



COLUMBUS 1, OHIO

CONTROLS

THE SERVICE MAN'S DEPARTMENT

Here's how

Edited by
Warren W. Farr

Shortage of Cylinders Hits "Freon-12" Supply

Where have all the refrigerant cylinders gone? Officials of Kinetic Chemicals, Inc., producers of "Freon-12," would like to know. According to them, a shortage of Freon is ahead unless more cylinders are received for refilling at the factory.

The situation is critical for the vital deliveries that start in February and extend through the spring and summer. Return of empties has dropped so low in the last three months that, unless there is an immediate change, production of the refrigerant and its distribution will have to be cut.

Kinetic officials say that for the last eight months they have been shipping loaded cylinders far in ex-

OLD files, instead of being discarded, can be made into useful shop tools with but little effort:

All you have to do is grind down the broad end of the file so that it has a sharp edge, and put a wooden (or other) handle on the other end. The tool is then very useful around the shop for removing old gaskets which may be stuck onto refrigeration compressors or valves.

*Laguene Cool
North Platte, Neb.*

cess of the empty ones returned. They have placed large orders for new cylinders, but because of the shortage of steel, delivery of these has been slow.

They emphasize that ICC specification cylinders should be used for shipping only and not for storage.

So please—if you're hoarding cylinders, return them right away! You'll be helping yourself, as well as other refrigeration men. If all of us cooperate as much as we can, maybe we can lick this shortage problem. Don't let those empty cylinders stand around your shop; get 'em out and back to "work" for you and your fellow service men!

Out of Season

Nobody needs to tell you what a highly seasonal business the refrigeration servicing business is. But did you ever stop to think that there may be a number of ways in which you yourself can help to level off the peaks and valleys in your business curve? And these methods needn't be elaborate or expensive, either.

One enterprising dealer we know found himself hard put to keep his servicemen busy during the winter months. He hated to see them sitting around the shop on their hands day after day, yet he hesitated to let any of them go because he well realized how badly he would need good

trained mechanics when the summer rush rolled around again.

After giving the matter much thought, he came up with a sound idea which cost him very little but went a long way toward easing off the winter slump and at the same time helped somewhat to take a little of the edge off the summer rush.

What was this bright idea? Merely a double postcard which he had printed up and mailed to every appliance service customer on his books.

One side of this card was addressed to the customer and bore the following message: "Dear Customer—With winter now here it is the best time of the year to have your home appliances serviced and any needed repairs made. We are fortunate in having an efficient force in every department and they will be pleased to take care of your requirements. Just

HERE'S an easy, fast and accurate way in which to set pressure controls, especially when working on a cold box.

Instead of waiting for back pressure to build up so as to check cut in, I have found that by using my gauge manifold in the following way I can check or set my switch regardless of box temperature. Here's how:

First I see to it that my head pressure is fairly high. Then I close my suction valve, not allowing gas to enter the crank case from the line. After this I open the valves on my manifold, allowing gas from the high side to go into the case, building up a pressure. This is done as slowly as possible, to obtain an accurate reading. This operation can be repeated as often as you like in order to set your cut in.

To check cut out, back suction valve to open, trip machine to "on" and restrict suction valve very slowly until machine stops.

This system works out very well in the winter time when it's colder outside the box than it is inside.

John J. Palone, Brooklyn, N. Y.

HERE is a remedy for minor rotor shaft end-play noise.

For fractional horsepower motors driving horizontally shaft mounted fans, I have found that by slightly increasing the pitch, or "bite," of all of the blades evenly, this trouble will vanish like magic.

The reason for this is that when the pitch is increased, the blades bite into the air more and push the fan motor shaft back into one end position of the motor.

Caution: do not increase the pitch too much or else the motor will be overloaded.

It should be noted that this idea is not intended for motors having excessive end play. Also, this method does result in slight wear at the new working end of the thrust washer in the motor, but not enough to worry about if the pitch is not increased beyond the end-play elimination point.

It should also be remembered that this idea is suggested for fractional horsepower motors.

John E. Hayes, Springfield, Mass.

Editor's Note: In changing the pitch of the fan blades, care must be taken not to throw the fan out of balance. Be sure that each blade is moved the same degree.

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AUTHORIZED
DEALERS
ARE MAKING
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COMMERCIAL
REFRIGERATION

Package Units
Heavy Duty Air and Water
Cooled Units
Lehigh Mfg. Co.
Plant: Lancaster, Pa.
Export Department, 160 Broadway
New York, N. Y.

fill out the attached card and drop in the mail (no postage required) specifying the type of service needed, and we will do the rest. Yours for keeping home appliances going."

The other half of the card, which was self addressed with postage prepaid, provided space for the customer to indicate which appliance he wished to have checked, as well as the day and date on which he desired the service man to call. Space also was provided for the customer's name, address, and phone number.

WANT TO EARN \$5?



You don't have to be a writer or a literary genius! Just jot down some of the shortcuts you've developed in your maintenance or installation work and send them to **HERE'S HOW EDITOR, REFRIGERATION INDUSTRY**. Your \$5 will be paid promptly when your maintenance tip is published in the magazine. Let's hear from you!

Purging Is a Problem

As we all know, many refrigerants can be mighty irritating and even dangerous under certain conditions. Rare indeed is the serviceman who hasn't been forced to knock off a day or two at sometime during his career due to an unfortunate exposure to some refrigerant gas. Not infrequently this happens in the service shop itself, when a number of units are purged into the open air during the course of the day.

One way of minimizing this hazard and the attendants economic liability of enforced layoff due to illness induced by undue exposure to some refrigerant gas is to construct in your shop a separate room for this purging process. Literally a room within a room, this special chamber should contain wash tubs, solvent vats and trays for parts cleaning, some sort of a coil flushing hookup, and—most important of all—an exhaust fan husky enough to keep the chamber clear of

**recommended
for
painted or
enameled
surfaces...**

Jarrow...

Refrigerator Door Gaskets Are Again
Made From Crude Rubber

**Always Demand These
Quality Gaskets**

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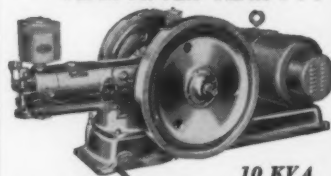
**Banish Profit Risks of
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Installing a vertical or horizontal **WITTE Dieselectric Plant** as stand-by electric light and power-producing equipment will make you independent of costly power and refrigeration interruptions. **Full Diesels**, they start and operate on inexpensive, non-explosive fuel oil. Factory-tested 100% for power and performance, their sizes range from 3 to 10 KVA-AC; 2.5 to 8 KW-DC.

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Simple, sturdy, your **WITTE Dieselectric Plant** will require little space, fuel or attention. Thousands in use. All are heavy-duty units, designed for trouble-free performance. See your **WITTE Dealer** or write for literature now.

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SHANK VALVES

SOLVE MAINTENANCE PROBLEMS

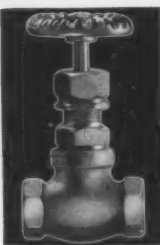


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All-Steel construction. Automatic shut off of liquid in case of glass breakage. Composition packing rings give long life, no-leak seal.

Semi-Steel SHUT-OFF VALVES

Highest grade non-porous metal—full size ports—clean cut threads. Double seated stem—Shank design base—perfect alignment. Long life packing ring.



See your jobber or write for prices.

CYRUS SHANK CO.

631 W. Jackson Blvd., Chicago 6, Ill.

excessive fumes.

If the main ceiling of your shop is high enough to permit it, you can save floor space by mounting your vacuum pump and air compressor on top of your purging chamber. If not, you'll have to install them alongside the room. But in either case you still will be keeping your main shop area free of potentially dangerous concentrations of refrigerant.

FAIR WARNING!



It CAN happen anywhere—and to dramatize that fact here's how Palmer Supply Co., refrigeration wholesaler in Tulsa, Okla., effectively used its bulletin board to impress upon its customers the importance of testing refrigeration cylinders regularly. Need more be said?

IOWA PARTS WHOLESALER OPENS DENVER BRANCH

White Refrigeration Supply, Inc., Des Moines, Iowa wholesaler of refrigeration parts and supplies, has opened a branch warehouse in a new building at 30 W. 10th Ave., Denver, Colo. Wallace A. Henry is vice president and manager of this new store, which is being operated under the name of Thermo Supply, Inc.

ALL-STATE OUTLETS

Distributors recently appointed by All-State Welding Alloys Co., Inc. for its line of low-temperature welding and brazing alloys and fluxes include J. B. Thomas Co., refrigeration division, Nashville, Tenn., and Industrial Supplies, Inc., Huntington, W. Va.

BUYS FLORIDA FIRM

Dell Wright has acquired the Gateway Refrigeration Service at 834 Flagler St., Jacksonville, Fla., and changed the name to A. & D. Refrigeration Co.

BUY FROM YOUR REFRIGERATION WHOLESALER

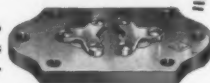


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Precision lapping, superior construction and simple installation make Chicago seals ideal for replacement.

Only Chicago valve plates have replaceable seats.



CHICAGO SEAL CO.
20 NORTH WACKER DRIVE • CHICAGO 4, ILL.

MARCH, 1948

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ATTIC and WINDOW FAN CONTROL

\$11.95 LIST



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"V-METH-L"
Methyl Chloride

**"EXTRA
DRY
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Liquid Sulfur Dioxide

**consistently pure
consistently sure**



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Distributors for Kinetic's "Freon" Refrigerants

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New modern home of UNITED COMMERCIAL SALES CO., Los Angeles. Note the spacious loading platform and convenient paved parking space, with store entrance handy to the parking lot.



Your Refrigeration Equipment Wholesaler

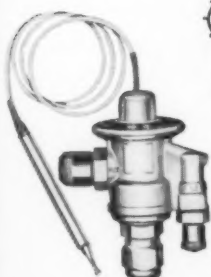


Indirect lighting, modern interior styling, effective new display counters and racks and a long sales counter handy to well-filled stock shelves make this new store of the United Commercial Sales Co. one of the inviting and efficient in the Los Angeles area.

... Provides an "INSIDE TRACK" to Your Supply Sources

Your Refrigeration Wholesaler holds a unique position in your progressive industry. Practically, he is the conscientious local representative of hundreds of manufacturers. Yet he enjoys the unusual privilege of being able to choose his products solely on the basis of their merit—their value to you, his customer. And he really exercises that privilege critically, to display and stock only performance-proven equipment, parts, supplies and tools—the kind you can depend upon to simplify your service problems and to protect and improve your reputation for quality workmanship among your own customers. He knows most Refrigeration Manufacturers intimately, contacts them daily, enjoys their confidence, and merits prompt and careful service from all of them—to your benefit.

Add New Refrigerant-Control DEPENDABILITY to Refrigeration Systems...



MODEL 207 Thermostatic Expansion Valve Capacity to 1/2 ton Freon

One of today's most popular small-system Expansion Valves, Model 207 is designed for all applications involving low, medium or high suction temperatures. You'll want it for display cases, small walk-in and reach-in boxes, ice cream cabinets, freezers, air conditioning and similar units.

YOUR WHOLESALE STOCKS THESE VALVES,
OR WRITE FOR BULLETINS E131 AND E156.

MODEL 212 with New Pressure Limiting Feature

Designed to protect your systems against motor overload, Model 212 may be used in place of any expansion valve of similar capacity — 1/2 and 1 ton Freon or Methyl. Types available to limit pressures to 15, 40, and 55 lbs. Freon 12; 10 and 30 lbs. Methyl.



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STOCKED AND SOLD BY GOOD REFRIGERATION WHOLESALEERS EVERYWHERE
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Yes, the 5th All-Industry Refrigeration and Air Conditioning Exposition was a great Show — a **SELLING** Show — and reports from exhibitors indicate that it presented ample proof of the Show slogan—

"SALES CAN BE GREAT IN '48!"

That is why a major section of this issue is devoted to a resumé of the many new products displayed at the Show, and to a coverage of the Show-time activities of the people who, through one channel or another, will merchandise, install, and service them.

The Refrigeration Industry

